

The Autocar
APRIL 25, 1952

British Cars for the World

1/-

The Autocar

FOUNDED 1895

LARGEST CIRCULATION

**You get so much more
in the MINX . . .**

CRAFTSMAN BUILT
by
THE ROOTES GROUP



CRAFTSMAN SERVICED

by your local
Hillman dealer

**. . . you get so
much more out of it**

THE HILLMAN MINX

SALOON · CONVERTIBLE COUPE · ESTATE CAR

HILLMAN MOTOR CAR CO. LTD. COVENTRY LONDON SHOWROOMS & EXPORT DIVISION: ROOTES LTD. DEVONSHIRE HOUSE PICCADILLY W.1

BEHIND THE WHEELS OF BRITAIN'S MOTOR INDUSTRY



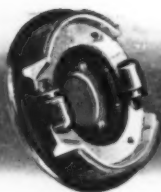
Lockheed Leadership introduces Britain's newest artist, Bernard Cheese, whose striking impression of part of the famous Austin foundry is reproduced above.

In the great Austin factory at Longbridge, Lockheed technicians bring 25 years' specialised experience of hydraulic brake design to their association with Austin engineers in enhancing the high standards of performance for which both vehicles and brakes are renowned.

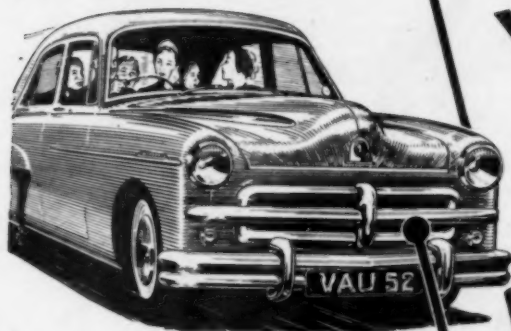
80% OF THE WORLD'S CARS FIT

LOCKHEED
REGD. TRADE MARK
Hydraulic brakes

THE SAFEST BRAKES IN THE WORLD



AUTOMOTIVE PRODUCTS COMPANY LTD LEAMINGTON SPA

NEW!

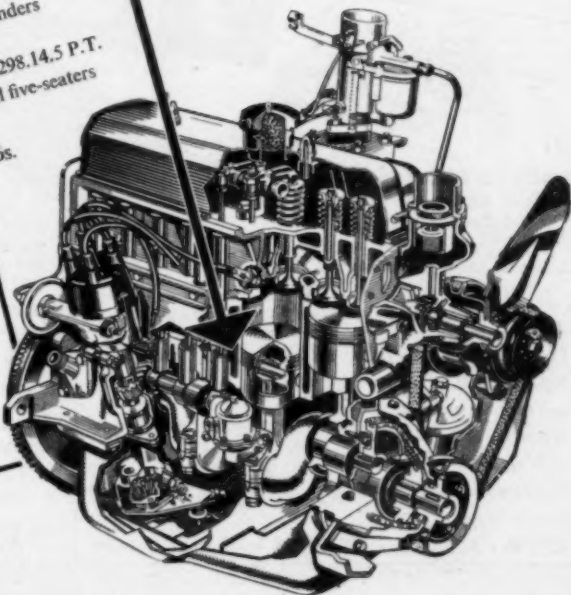
VAUXHALL ★ SQUARE ENGINES

More power... more m.p.g.... longer life... from the new "Square" engines in the famous Vauxhall Wyvern and Velox. Higher speeds, faster acceleration, greater verve—yet fewer stops for petrol. Tests show cylinder bore life increased by 50%. Wyvern now has top speed of 70 m.p.h. Velox maximum goes up to 80 m.p.h. Petrol consumption is 3 to 4 m.p.g. better than with previous engines. Here is new efficiency and economy with all Vauxhall's famous comfort and reliability. Your local Vauxhall dealer will be pleased to supply details. Wyvern, 4-cylinders 1½ litres, £495 plus £276.10.0 P.T. Velox, 6-cylinders 2½ litres, £535 plus £298.14.5 P.T. Similar in size and styling, both are full five-seaters with space for a sixth.

VAUXHALL MOTORS LTD • LUTON • BEDS.

★ "Square" is the engineer's term for the new high-efficiency engine with equal bore and stroke. The new Vauxhall engines (Bore 3½", Stroke 3") are "better-than Square".

- More power
- Less petrol
- Longer life



And SQUARE DEAL SERVICE from 665 authorised Vauxhall dealers. Factory trained mechanics... specialised tools and equipment... charges based on standard times.



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**FOR TOP
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*** PROVED ECONOMY ...**

Cost:—5 gallons of Petrol 21/3

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Total Cost ... 22/3

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(APPROX)**



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**1/-
PER TUBE**

IN THE NEW AND
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- ★ PREVENTS internal friction, carbon formation.
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6 Petroslip Tubes for the price of 5

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APOLLO POLISH is used, approved **14oz. @ 3/9**

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REGISTERED TRADE MARK
Not just a retread

BUT THE PROVED PROCESS OF TYRE RECONDITIONING

**ON A COMPLETE SET
SIZE 4-50-17 YOU SAVE
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New ...	£4. 19. 2
"TYRESOLES" ...	£2. 10. 7
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**AND THE
AUTOMOBILE INDUSTRY**

Enots provide a wide range of Standard Equipment which is supplied to many leading vehicle manufacturers throughout the world. The photograph is by courtesy of the Bristol Aeroplane Co. Ltd.

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Phone: Aston Cross 1905

This need not happen to you

Ignition failure is the most common cause of breakdowns on the road. Deterioration of the ignition system is gradual and unnoticed, so failure therefore comes without warning.

The 'ENGLISH ELECTRIC' electronic ignition tester is a safeguard against this. It "looks" into the ignition system, and is the only tester with a cathode ray tube showing on a screen the exact state of the car ignition. A test is carried out under working conditions and gives a complete diagnosis of faults, and at the same time a warning of impending failure.

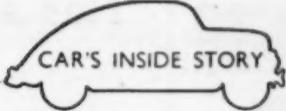
Faulty ignition is responsible for poor engine performance and can account for as much as 25% increase in petrol consumption.



'ENGLISH ELECTRIC' ELECTRONIC IGNITION TESTER

Have your ignition tested regularly at your garage by this method and ensure
AVOIDANCE OF IGNITION BREAKDOWNS
IMPROVED ENGINE PERFORMANCE
MORE MILES PER GALLON

The ENGLISH ELECTRIC Company Limited, Queens House, Kingsway, London, W.C.2, Industrial Electronics Dept., Stafford.


 CAR'S INSIDE STORY

What car's he got?

He gave you a lift last week—now can you remember what kind of car that was? Probably not.

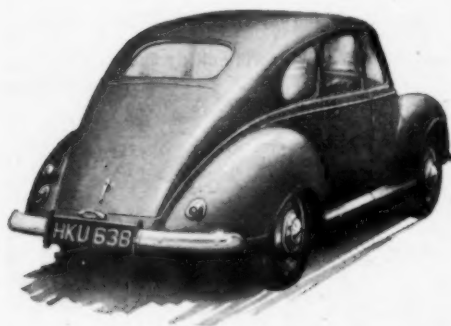
If that car had been a Javelin you'd have noticed.


When you're in one you feel something happening—you know it's not an ordinary car. There's that quick gear change all the experts praise; flashlight acceleration (0-70 in 36.4 secs.); a genuine 80 m.p.h. and torsion bar suspension that does what only torsion bars can do to bumps.

It only needs one short ride in a Javelin for you to start thinking, yes, one day this car's going to be yours.

The Javelin is a waste of money if you don't care what a car does. There's such a lot built into it that doesn't really show until you have one in your hands—real family comfort—and performance.

Best speed, electrically timed, 80 m.p.h. Acceleration 0-50 m.p.h. in 15.4 secs. ("The Motor" 1952 Road Test). Horizontally opposed flat-four engine gives 30 m.p.g.



The 1½ litre 

JOWETT JAVELIN

one day—it has to be YOURS!

Made by Jowett Cars Limited, Idle, Bradford, Yorkshire, who make the Jowett Jupiter convertible—class winner of 9 major trials and races in 1950/51—and, of course, the famous range of 8 h.p. Bradford commercial vehicles.

Up she goes....



overhead & out of the way!



- with the

ACROW

UP & OVER

Garage Door Fitting

You can now buy this beautifully made mechanism which converts your old-fashioned garage door into the luxury "Up and Over" type at the amazingly low price of £10.6.2.

Send now for fully descriptive leaflet A.D.F.

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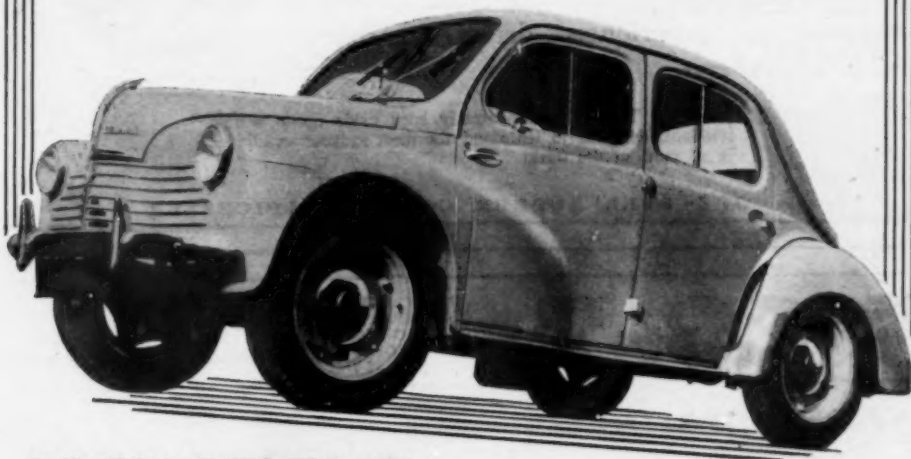
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MORE SAFETY
WITH GREATER COMFORT



THE RENAULT 750 FOR 1952

At the top of its class and there to stay—the Renault 750 goes from strength to strength. Now, in its 1952 form, a power increase to the 4-cylinder engine of more than 20% adds new quality to this already supreme light car. A highly manoeuvrable, power packed performer, the new Renault 750 will give you all the sparkling acceleration you need in traffic, more impressive top-speeds, crisper take-offs

and even more effortless hill-climbing—yet with always something in reserve. And still the 750's extraordinary petrol economy remains unaffected—a test by *The Motor* showed 50 m.p.g. at a steady 40 m.p.h! All this—plus improved Telescopic shock absorbers and bigger tyres to provide extra comfort and safety for 4 passengers—puts the Renault 750 on a high quality level unequalled in light car motoring.

RENAULT 750

RENAULT LIMITED, WESTERN AVENUE, LONDON W.3.

CVS-256

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It is significant that he fitted the Hillman Minx with JOHN BULL tyres from his own stock (he is Managing Director of A.B.C. Garages, Bradford).

We are particularly proud of this entirely unsolicited and unsponsored use of our tyres by such a successful and experienced driver on this record-breaking run.



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Payment: against opening of credit.

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Delivery: free our Factory in Torino, including packing for shipment. Excluding any new carburettors required.



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If you've ever caught the fever of the race pits at Le Mans, Spa or Ulster . . . if you saw, or read about, the 2½-litre Aston Martins at Le Mans, 1951, five started, five finished, 3rd, 5th, 7th, 10th and 13th in the General Classification . . . then the DB.2 is, unshakably, your ideal of the race-bred luxury car.

Yet (did you know?), the Aston Martin's power unit is in the Lagonda, too. Not to race, but to provide the

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Each car gives you something distinctively its own, and is in this sense "better" than the other. Which would you prefer to own?

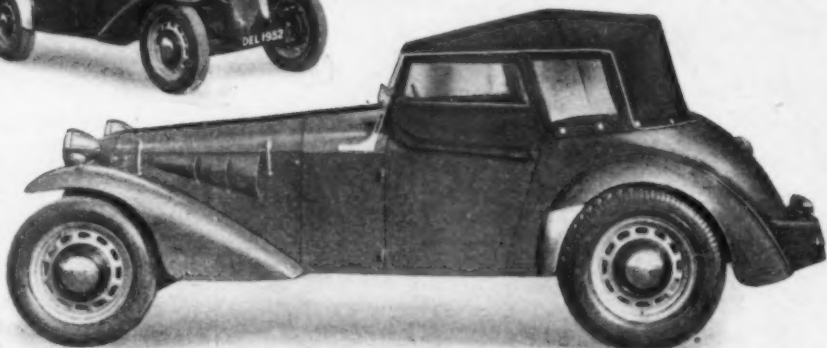
ASTON MARTIN LTD. LAGONDA LTD. FELTHAM MIDDLESEX ENGLAND
London Showrooms, 103 New Bond Street, W.1

DAVID BROWN COMPANIES

E C O N O M Y — V E R S A T I L I T Y



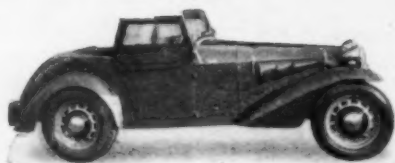
Dellow MARK III
OCCASIONAL FOUR



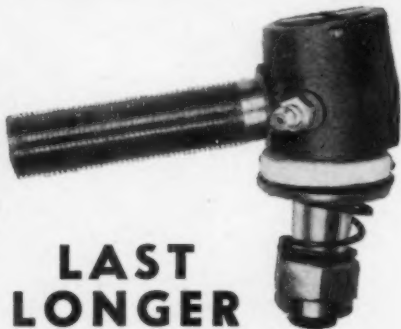
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Lockwood
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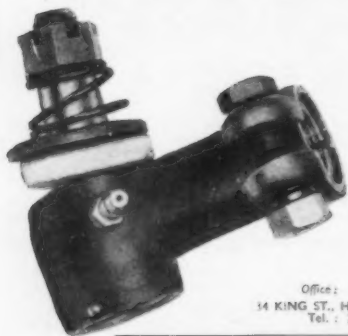
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LONGER**

because they are fully adjustable

At the slightest sign of looseness or wear in your steering get your local garage to fit your car with **LOCKWOOD** Adjustable Track Rod and Drag Link Ends. **LOCKWOOD'S** ensure accurate steering, easy maintenance and they do **LAST LONGER**. Solidly constructed from forged steel, they are simple to dismantle, and each part can be supplied as a separate item. The **ADJUSTABLE SCREW CAP** enables any wear on ball pin or ball seat to be taken up, and the life of the Track Rod End is considerably lengthened.

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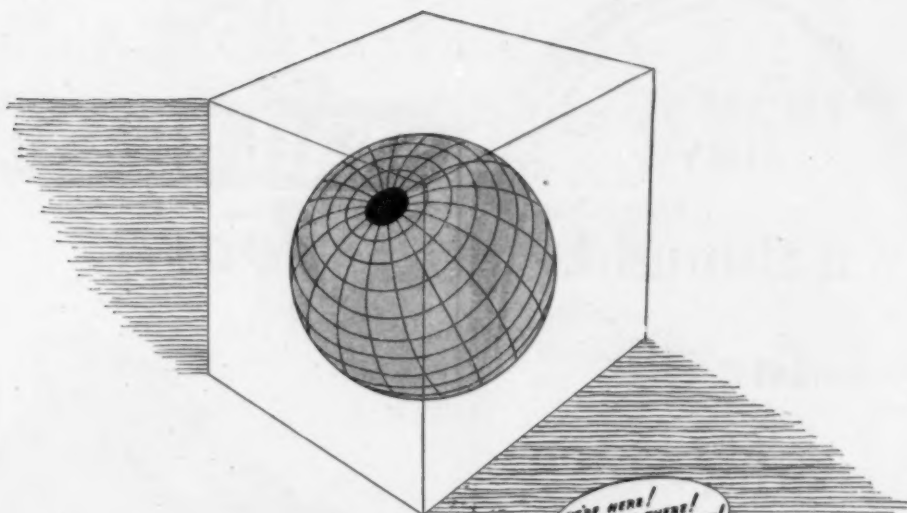


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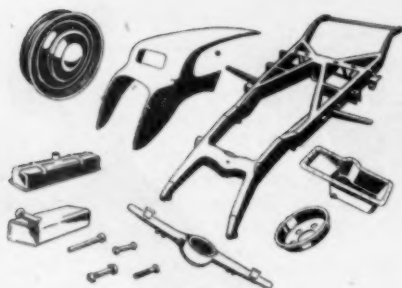
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a thought
for the
safety of
others

-and for
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Autocar Photograph

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speed supremacy under stringent road test conditions has now remained unchallenged

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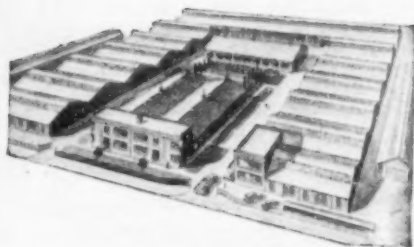
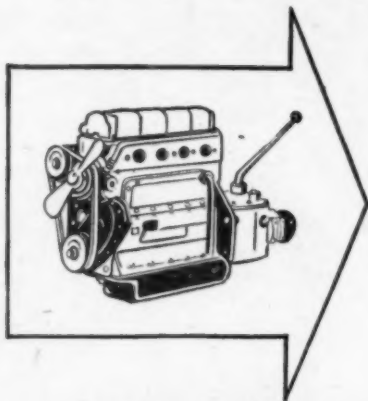


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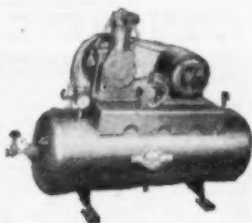


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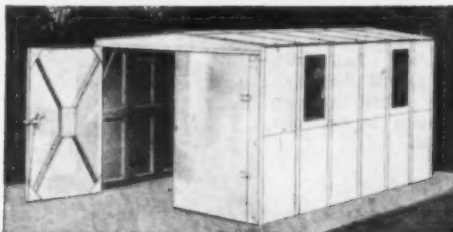
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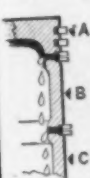
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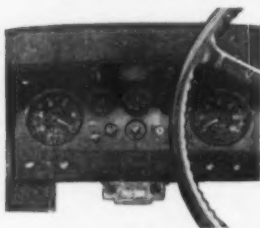
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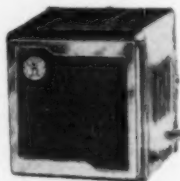
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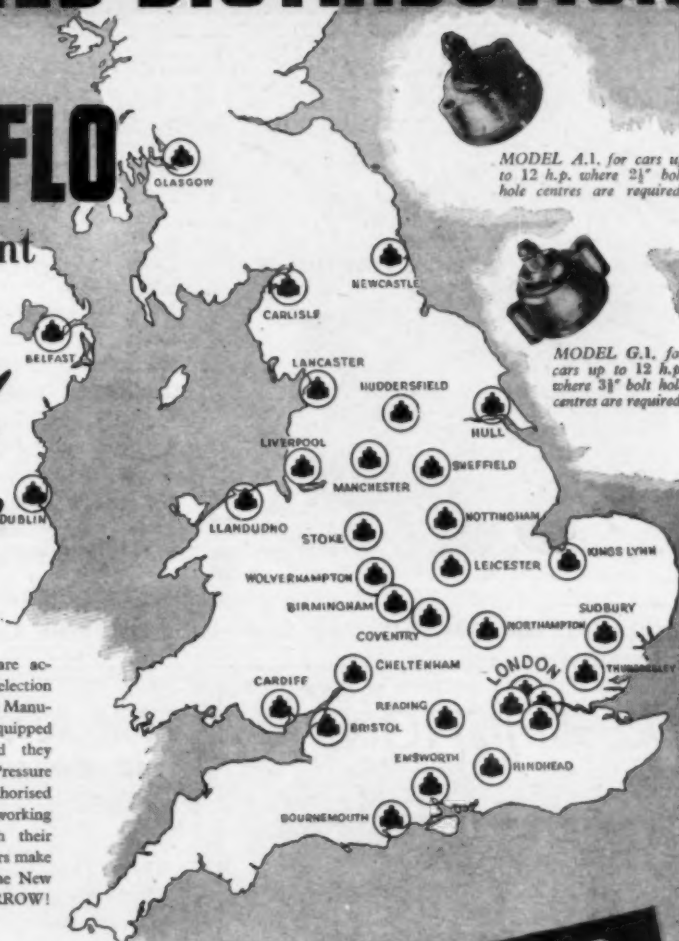
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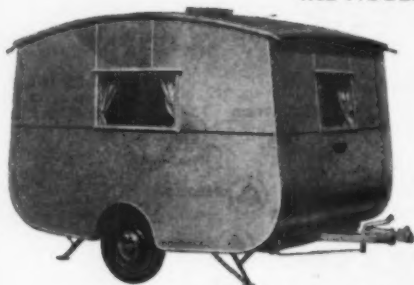
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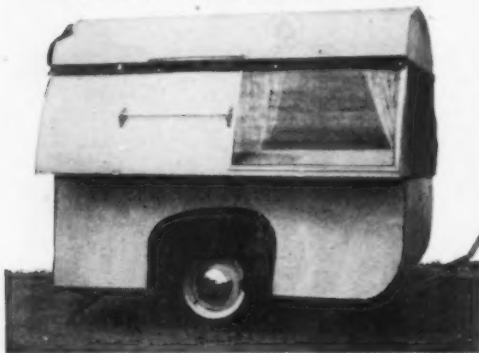
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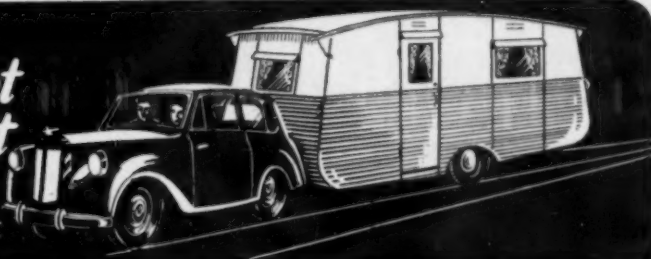
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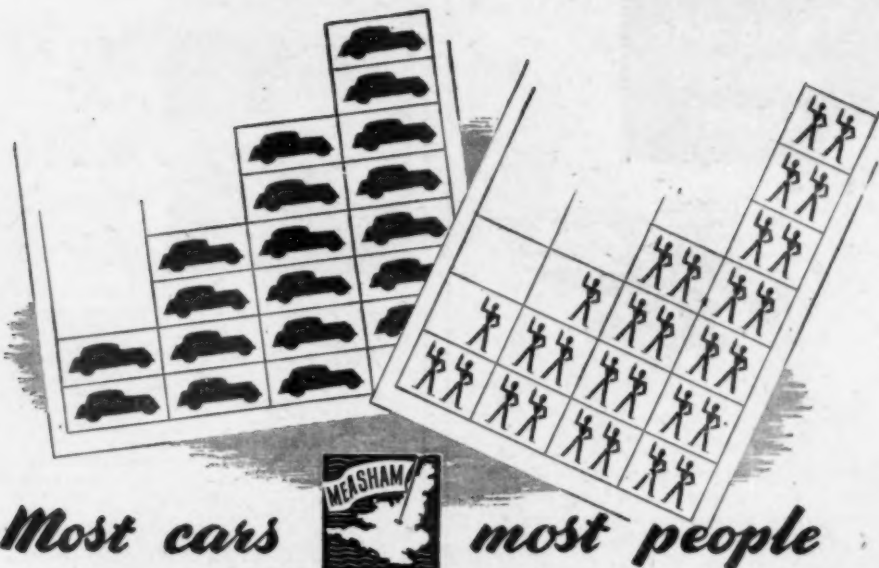
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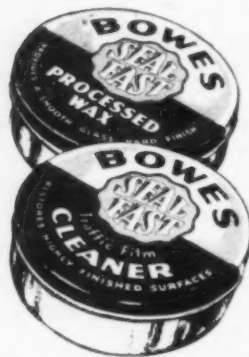
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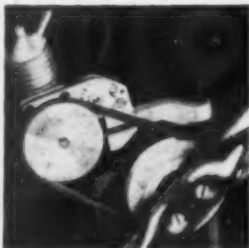


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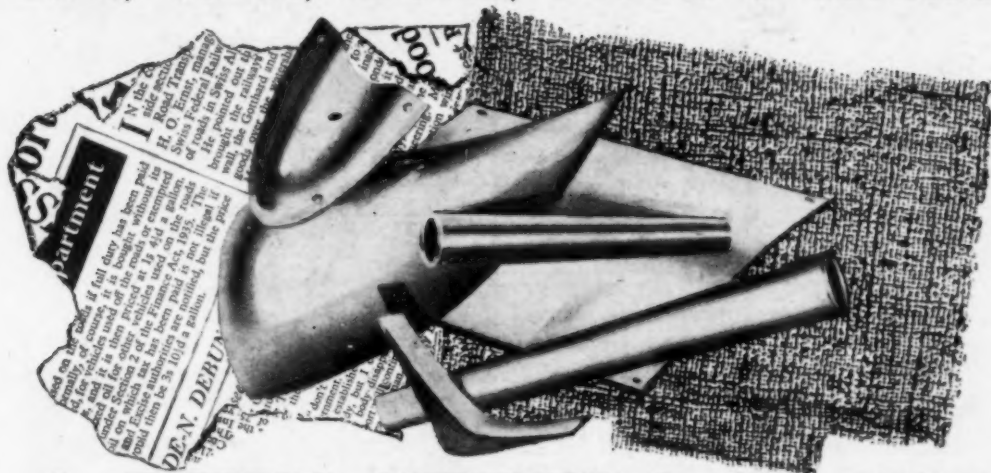
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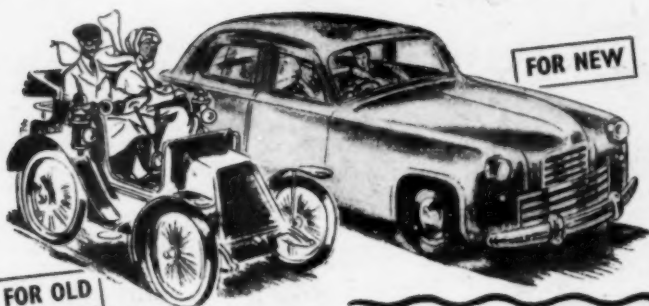
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FOR MOTORISTS

What is the simple answer to these common motoring problems

- 1 Worn Engine Burning Oil?
- 2 Engine Running Hot?
- 3 Leaky Silencer?
- 4 Leaky Radiator?
- 5 Cracked Block?
- 6 Battery Corrosion?
- 7 Bodywork Repairs?

1 WORN ENGINE

Burning Oil?

PISTON SEAL compensates wear by forming a self-lubricating seal in between piston and cylinder, reduces oil consumption, restores compression. Installed in 30 minutes, PISTON SEAL is an interim treatment, endorsed by the entire Motoring Press and gives up to 10,000 miles 'new car' performance.

Holt's PISTON SEAL

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For Motor Cycles 8/6

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Holt's RADFLUSH

Complete Treatment 9/6

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Holt's GUN-GUM

Junior Size 3/6

4 New Plastic Metal repairs PERMANENTLY!

DENTED, HOLED & RUSTED OUT METAL

LOY repairs permanently all damaged metal-work in car bodies and wings, pipes, tanks etc. Applied simply like putty, LOY adheres permanently, moulds to shape, sets rapidly metal-hard, can be filed, drilled & tapped. Water, oil and petrol-proof, withstanding heat up to 100°C and 150 l.b.s./sq. inch pressure. Restore weak and rusted metal with LOY Sheeting as a base for LOY Metal. LOY Solvent is used to thin LOY Metal and to soften LOY Sheeting. A LOY repair is undetectable and outlasts the repaired part!

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4 Leaky Radiator?

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5 Cracked Block?

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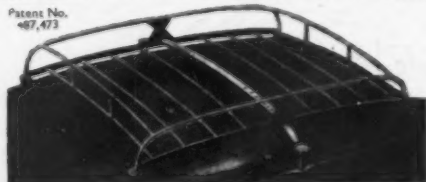
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Since to convey in words the quality of the 'Regency' is all but impossible, perhaps the most apt description of this superb, high-performance six-seater is—

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Home and Abroad

VICISSITUDES in the overseas markets are nothing new to Britain's motor industry. They have been going on for so long that it is possible to derive a certain cynical amusement from the illustration they afford of the effect of the control by governments of the simple desire of human beings to barter goods with one another. For the closure of an export market to British cars these days does not mean that the customer no longer desires British goods, but merely that the government planning of the country concerned has not included British cars.

Other more quixotic reasons sometimes account for the failure of governments to reach agreement on the import of cars. The nationalism that is far too evident in the post-war world has produced a xenophobia in some countries that makes their rulers resent the presence of even desirable foreign goods; similarly, considerations of prestige make countries try to create a car-manufacturing industry of their own instead of relying on the foreigner for transport vehicles. Ideological rivalries are an enormous factor, most evident in the so-called "enlightenment" of Europe. The mere trickle of cars that passes through the Iron Curtain is a monument to the stupidity of man as evidenced in his politics.

What should be the attitude of the British car manufacturer in the face of this near-confusion? On that score there need, fortunately, be no doubt. Primarily, he must continue to manufacture a product that his own ability, plus the reactions of the customer, tells him is desirable in its efficiency, appearance and value for money. Only incidentals need interfere with this aim, such as the necessity of building within the construction and use regulations of the various countries of the world.

None the less, it would be absurd for him to cultivate his own garden to the exclusion of all else. The motor industry is one of the most powerful in the country and should be capable of bringing legitimate pressure to bear upon the Government to do all that it can to avoid the constant disruption of export procedure. A glaring example that it does not always do so was provided by the shock of the latest Dominion import restrictions, which showed that the London conference of Commonwealth finance ministers had been less successful in the co-ordination of policy than might have been hoped. If a Dominion balances its foreign account at the expense of the Mother Country the net sterling area gain is precisely nil.

Amongst all this, the home customer feels lost and ill-treated, and he must be forgiven some scepticism over the latest regulations for fair shares of new cars which are outlined on page 503. The Associations concerned with new car delivery have, as promised, tightened up the loopholes in the distribution scheme as applied up to now; they promise, also, that their efforts in this direction will continue. The British Motor Trade Association remains the policing body, and the two-year Covenant entered into by the buyer with that body remains. It is supplemented by an "Agreement and Declaration" which the law will no doubt establish as legally binding in subsequent test cases. Thus, false declarations will be punished where they can be detected.

In this respect, however, exists one of the glaring weaknesses of the scheme, and one that it is very difficult to eliminate. If both dealer and customer conspire together to break the rules detection must depend on the vigilance of the B.M.T.A. or on the information of a third party, and with a minimum of 60,000 transactions this year the weakness is obvious. A second weakness lies in the establishment of precedence amongst customers in accordance with official recommendations. This is left to the dealer concerned, and, quite apart from the dubious ethics of allowing one class of citizen to sit in judgment upon another without legal qualification, the fact remains a great temptation to all parties.

One further factor intrudes on the position—the pile-up of export cars owing to current market difficulties. In the end, of course, these must be released to the home market; common sense demands it rather than that they should stand and deteriorate all over the country. Thus the home market situation may ease surprisingly.

Coming to Britain?

ADVICE FOR THE MOTORIST VISITOR FROM OTHER COUNTRIES, SOME OF WHICH IS OF VALUE TO THE NATIVE

IT seems always that there is a wide difference of experience between the first delightful decision to take a holiday abroad and the moment when a family locks up a suddenly strange and empty house to drive with the suitcases to the port. Intervening have been shipping reservations, documents, hotel bookings, packing, the necessity, perhaps, of boarding a pet animal out with a dreadful reluctance to part with it, and the ever-growing, almost guilty, doubt that it may not be worth it after all.

Your national motoring club, or an accredited travel organization, will book the passage and reserve the necessary shipping space for the car; the cost of this will, of course, depend upon its wheelbase and the number of passengers carried. It is wise, also, to reserve space for the return voyage, for the number of cars leaving this country during the summer and early autumn months is sufficient to fill the available service.

A passport is an obvious necessity, and tourists from Spain, Germany, and certain South American and Iron Curtain countries must also obtain British visas. With the passage reservation, arrange for the issue of an International Touring Document (a Customs Pass) for your car—that is, a *Carnet de Passages en Douanes*, or, if one country only is to be visited, a triptyque—an International Driving Permit for yourself and any member of the party who will share the driving in this country, and an International Certificate for Motor Vehicles.

Here, briefly, are the functions of these three documents. The first, the Carnet or triptyque, is supplied through the national motoring clubs of each country, and by international agreement is the only piece of paper that carries the magic of exempting you

from the payment of purchase tax and Customs duty on the car when you bring it temporarily into the United Kingdom for a holiday.

This document provides for a stay of up to one year, but it does not permit the car to be lent, sold, hired, given away, or exchanged while it is in the British Isles. If you have not obtained a Carnet or triptyque before the car's arrival in England, you must deposit with the Customs officials at your port of entry Customs duty, at the rate of 33½ per cent (or 22 2/9 per cent for visitors from the Empire), and purchase tax of 66½ per cent of the duty-inclusive wholesale value of the car in this country at the time of importation. This money will, however, be refunded when the car is taken out of the U.K.

Freedom to Drive

You are entitled to an International Driving Permit if you have passed the driving test in your own country. Driving licences are necessary in Great Britain, and the Automobile Association and R.A.C. port officials (whether or not you are a member of these organizations) will supply at the port of entry a British driving licence free of charge, if you hold the former international permit. If you do not hold this, but can produce the driving licence of your own country, the British licence will cost five shillings. You may not yet have passed the driving test in your country, but even so, you need not despair, for the A.A. will arrange for you to take the British test during your stay here. The A.A. and R.A.C. officials will, also, provide at the port of entry an International Circulation Permit, to enable you to drive in this country for 90 days without having to obtain a Road Fund Licence.

You may drive in the British Isles with your car's original registration plates if you have an International Certificate for Motor Vehicles—the third document on my list—and this in turn depends upon whether your own country is a signatory to the International Convention relating to motor traffic. If it is not—the United States, for instance, have not signed this convention—the R.A.C. or A.A. officials will issue registration plates at the port of entry for temporary use in this country.* One other point: it is legally essential for cars driven in the United Kingdom to be insured against third-party risk; but, if this insurance cannot be arranged before you leave

your country, the R.A.C. or A.A. will arrange it in England.

However formidable these documents may seem at first reading, half their bark and all their bite is stilled by the knowledge that they should be supplied automatically if you book the passage through a national motoring club or accredited organization.

If you plan to stay on the coast during the summer months it is necessary to reserve rooms well in advance. But if you want to tour the British Isles, stopping for a few nights in different quiet country places, normally accessible only to people with cars, there is little difficulty in arranging comfortable accommodation each night. It is always wise to stay at a recommended hotel. I have, therefore, listed a few books which I hope will help in finding the type of hotel at which you would like to stay within your personal budget. I have chosen the books for their originality and

APPROXIMATE RATES OF EXCHANGE FOR TOURISTS FROM ABROAD

(Although these may vary slightly from day to day, the following may be taken as a basis guide)
 U.S.A.—2.80 U.S. dollars to £1 sterling.
 Canada—2.75 Canadian dollars to £1 sterling.
 France—665 French francs to £1 sterling.
 Switzerland—15.20 Swiss francs to £1 sterling.
 Holland—10.60 guilders to £1 sterling.
 Italy—About 1,750 lire to £1 sterling.
 Denmark—13.55 Danish kroner to £1 sterling.
 Sweden—14.50 Swedish kroner to £1 sterling.
 Norway—20 Norwegian kroner to £1 sterling.
 Luxembourg—140 francs to £1 sterling.
 Belgium—40 francs to £1 sterling.
 Portugal—20 escudos to £1 sterling.
 British money—£1 equals 20 shillings; 1 shilling equals 12 pence; 1 penny equals 2 half-pennies; 1 half-penny equals 2 farthings. Two shillings and sixpence make up a half-crown, and the two-shilling coin is sometimes called a "florin." The shilling is slangily called a "bob." Thus a "ten-bob note." Similarly, slang for a £1 is a "quid." British Pool petrol is about 4s 3d per gallon, variation occurring in certain areas.

freshness. By the places and hotels they mention one can detect imagination and good taste. They are, in fact, the sort of books that I should like if I were visiting your countries.

Especially helpful for finding a holiday hotel in this country, or for general touring with a car, is W. G. McMinnies' *Signpost*. It is a large, friendly book, giving a wonderful selection of hotels in Britain, the Channel Isles and Scotland. Mr. McMinnies is a connoisseur of hotel service, its cuisine, general comfort and surrounding countryside. All the hotels in this book he has recently visited, and has mentioned them for their especial character and comfort. Nothing escapes his perception—the serving of a dish, the flowers which matched the wallpaper in an hotel bedroom, the shape of an arch, the slope of a lawn. (Price 10s 6d, from Simpkin Marshall, Ltd., Rossmore Court, Park Road, London, N.W.1.)

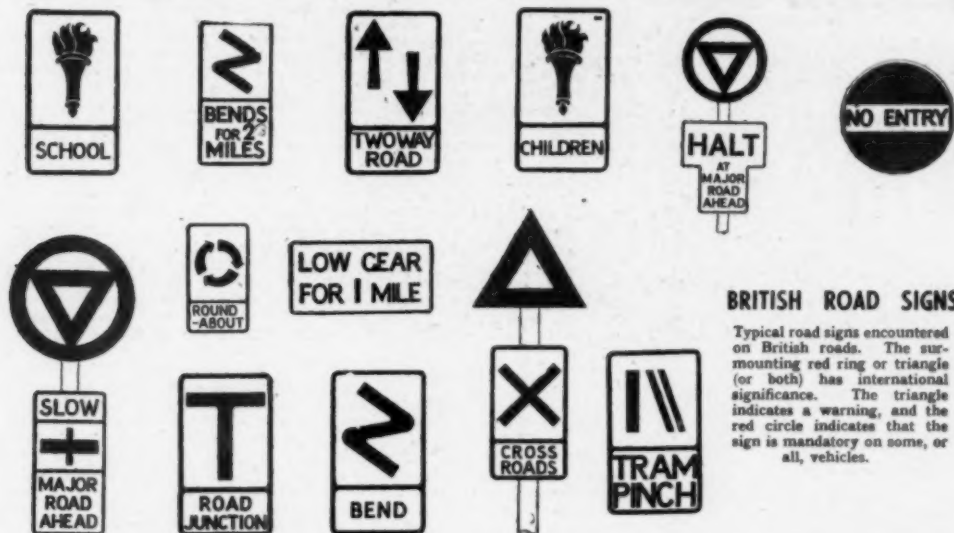
But if you are not confident of your

CROSS-CHANNEL STEAMER SERVICES

Car and passenger ferry services between Britain and the Continent are many and serve various ports. Full particulars can be obtained from the Royal Automobile Club, 85, Pall Mall, London, S.W.1, the Automobile Association, Farnham House, New Coventry Street, London, W.1, or from any accredited travel agent.

It must be emphasized, however, that the congestion on these routes during the holiday months is so great that the motorist is more or less in the hands of the booking agent, whose habit it is to provide the nearest available sailing to the desired date, time and route. Visitors should therefore allow for some flexibility in this respect and should make their applications as early as possible. Freight rates for cars vary from £5 to £16 13s (single fare), according to wheelbase.

* A bill, which includes a clause relating to the use of temporary registration plates in the United Kingdom, is now going through Parliament, but the present regulations as explained are still enforced.



BRITISH ROAD SIGNS

Typical road signs encountered on British roads. The surmounting red ring or triangle (or both) has international significance. The triangle indicates a warning, and the red circle indicates that the sign is mandatory on some, or all, vehicles.

selection, or too busy to arrange, Cook's Autotravel Department (Berkeley Street, London, W.1) will plan an itinerary of your choice in England, Scotland, Wales and Ireland, reserving en route the necessary hotel accommodation.

Another point you may consider is the purchase here of a British car, which should be previously arranged with the manufacturer concerned. Foreign customers, buying with foreign currency, are given priority and do not have to pay purchase tax—as British buyers must—on a car of British make. Manufacturers in this country have special plans in operation to deal with such orders efficiently. A car bought in this way must, at the end of the holiday, be shipped back to your home country.

If you buy a second-hand car in this country, or hire one for use here, the R.A.C. and A.A. provide a technical service under which an expert will examine for an overseas member a car which he may intend to buy or hire in the United Kingdom, making a report on its condition and offering advice to the member concerned in the matter.

Money brought into the United Kingdom must be in the form of travellers' cheques, obtainable from a bank; Cook's travellers' cheques will be supplied at your local branch of Thos. Cook and Son, Ltd.

With English weather as undecided as the flight of a butterfly—even in June, July and August—it is wise to pack some light woollen, as well as cotton, clothes and a mackintosh or light overcoat. And when packing it is fun to consider for a moment the idiosyncrasies of the British Customs.

Apart from its being against the rules of the Customs game to import into this country a lepidoptera without special licence, no raw meat may be imported from the Continent. Non-European visitors may import free of duty the following consumable goods:

Tobacco (including cigars and cigarettes) 1 lb.

Spirits (including liqueurs and cordials) 1 bottle; that is 1/4th of a gallon.

Wine, 1 bottle; half-a-pint of perfumed spirits and toilet waters.

European visitors are allowed a little less:

Tobacco (including cigars and cigarettes) 1/2 lb.

Spirits (including liqueurs and cordials) 1/2 bottle.

Wine, 1 bottle; half a pint of perfumed spirits and toilet waters.

GALLON CONVERSIONS

British Gallons to Litres	Miles to Kilometres
1 gallon — 4.54 litres	1 mile — 1.60 kilometres
5 gallons — 22.75 litres	1 kilometre — 0.62 miles
10 gallons — 45.46 litres	5 miles — 8.04 kilometres

Personal clothes are, of course, permitted, and personal jewellery, camera, radio set, etc.—provided, that is, that you take them out with you again. A foreign visitor may, if he wishes, import without special licence 50 lb of food (eggs, butter, tinned foods, cooked meats, cheese, etc.) into the United Kingdom, but not more than 10 lb of any one foodstuff. This concession does not, however, mean that any duty chargeable will be waived.

We will imagine now, for the sake of progress, that you have watched the white cliffs of Dover become larger and less white, and have arrived in the port itself. I choose Dover as an example of any British port. Here the

Royal Automobile Club and Automobile Association officials will be recognizable by their uniforms. In the Customs shed your Carnet for the car will prevent you from having to leave with the Customs officials a considerable amount of money (as mentioned above), and the A.A. and R.A.C. will give you an International Circulation Permit, the essential British driving licence, and temporary registration plates for use in this country, if these are required (see previous paragraphs).

With your British licence, you will be given a copy of the Highway Code and a windscreen sticker which shows the meaning of every British road sign. The Highway Code will help you to understand the British rule of the road.

Whatever the Government in power, we drive still to the left and overtake only on the right. And, if a driver suddenly thrusts his hand from his window, he intends not to test the direction of the wind, but to give a hand signal; for hand signals—unofficially to wave a car on, or to indicate an imminent stop—are frequently used, even when the car is fitted with efficient traffic signals. Incidentally, to pass the British driving test, it is necessary to be able to use all the hand signals.

Cross roads and some dangerous intersections are often controlled by traffic lights. The colours are green (for Go), amber (Stop), red (Stop), red and amber together (get ready to start). The green light facing you is, therefore, the only one that permits you to pass an intersection. Your horn may take a rest; it is not used, as on the Continent, for frequent signalling to other cars. After 11.30 p.m. and before 7.30 a.m. the horn must not be

Coming to Britain? continued

used in built-up areas—that is, where the 30 m.p.h. speed limit applies as indicated by signs, and warning can be given by flashing head lights at uncontrolled crossings. Many—too many—miles of British roads are subject to the 30 m.p.h. limit. Indication is given by circular signs on both sides of the road, entry to a limited area being shown by a red “30,” whilst the end of a restricted area is shown by signs of similar size bearing a diagonal black bar. Broadly, where there are street lamps there is a speed limit of 30 m.p.h. (48 k.p.h.), but this is not an invariable rule.

Night driving is made easier by the broken white line or winking “cat’s-eye” reflectors that stream ahead along the centre of many roads. Where the white line is unbroken at a bend, a dangerous corner or intersection, or a length of road where for some other reason overtaking can be dangerous, it is well to keep to the left side of it.

Whether or not you intend first to visit London, one cannot write for overseas motorists in this country without giving some time and space to this city that sprawls along the Thames into a green belt of woods and fields. London is not a motorist’s paradise. In its restricted parking space and columns of traffic, the large car can suddenly become less convenient than a baby’s push-car. The Touring Department of the Royal Automobile Club (Pall Mall, London, S.W.1) will, however, plan for you different routes through London, to avoid the congested bottle-necks of traffic, advising you of good hotels and restaurants, car parks, service stations and difficult parking areas. Any information, in fact, that you may need on motoring in this country you will be able to obtain from the R.A.C. or the Automobile Association (Fannum House, New Coventry Street, London, W.1).

The R.A.C.’s itinerary service pro-

vides facilities for members and non-members alike. The Touring Department will plan on a map any journey you may wish to make in the British Isles, embracing historic country mansions open to the public, race meetings, festivals, fishing streams—anything, in fact, you may want to see. Details of any motor race meetings to be run in this country may be had from the Competitions Department of the R.A.C. And if you are overcome by indecision—the indecision that has sometimes hampered me when abroad—you need not let these doubts bother you; for the Touring Department will advise you of well-balanced, individual tours.

Safe Deposit

The A.A. and Cook’s Autotravel Department, also, plan itineraries, the latter organization reserving hotel accommodation en route. And, incidentally, for travellers not wishing to take their jewellery on tour, I am told that Cook’s will store it for a pre-arranged time in their strong room in London. Other centres of information, the British Travel Association, Tourist Information Service (64, St. James’s Street, London, S.W.1), and the Ulster Touring Agency, London Enquiry Bureau (13, Lower Regent Street, London, S.W.1), speak their purposes for themselves. The former publishes, with many other books useful to the foreign and British motorist alike, the magazine, *Coming Events in Britain*, which can be bought from the bookstalls or from the Association’s offices.

For London itself I cannot do more than list a few books beneath. Although the breadth and age of the city can reduce writers to a state of self-conscious solemnity not made for good reading, these books have, I think, emerged with their authors still

cheerful and concise. I hope they will help you to enjoy London, to find obscure cafés and ancient houses tucked away, as well as the famous ones, and to retain above all a sense of humour which is essential amid such grave and sometimes beautiful antiquity.

Good road maps are obtainable from the R.A.C. or A.A. Each organization publishes an official handbook, which grades hotels by stars according to their price and service, and lists petrol and service stations and restaurants for every place in the British Isles. Street plans are given for the big towns, and distances from London. Bartholomew’s *Road Atlas of England* (price 12s 6d, from bookshops) can be recommended as a trustworthy guide for navigators, and the *Motorists’ Guide to London*, published by the Shell oil company (price 5s, from bookstalls and shops), contains maps of London, plans of difficult spots in London’s traffic, hints on driving in the city, and information on its theatres, restaurants, parking places, one-way streets, telephone system and historic places to visit within easy reach of the capital.

The *A.A. Road Book* (price 15s, available to members) has recently been completely revised, and contains a set of road maps, planned routes, town plans—all the information, in fact, that a motorist may need when touring England.

The British banks—Barclays, Lloyds, Midland, National Provincial and Westminster, are the famous ones—have branches everywhere in London and throughout England, where travellers’ cheques can be exchanged for British money, and advice obtained on exchange rates and other monetary matters. From Monday to Friday the banks are open from 10 a.m. to 3 p.m., on Saturdays from 10 a.m. to 12 noon, and on Sundays not at all. Many of the larger hotels have facilities for the

BOOKS, HELPFUL AND ENJOYABLE

Comprehensive Guides

R.A.C. Guide and Handbook (price 5s, available to members and non-members, The Royal Automobile Club, Pall Mall, London, S.W.1), *A.A. Handbook* (available free to members, Automobile Association, Fannum House, New Coventry Street, London, W.1), published in three volumes, England and Wales, Ireland, Scotland. The above guides provide graded hotels, and service stations and restaurants for the whole of the British Isles, street plans, distances from London, etc.

Hotels and Restaurants in Great Britain (price 3s 6d, issued by the British Hotels and Restaurants Association, 88, Brook Street, London, W.1), containing hotels and restaurants for the whole of the British Isles.

The Sunday Times Travel and Holiday Guide to Great Britain (price 10s, published by The Sunday Times, Kemley House, London, W.C.1); an unusually attractive, but still comprehensive, guide, including separate sections on the Thames, inn signs, country houses, shops.

The Autocar Town-to-Town Mileages (price 1s, from Iliffe and Sons Ltd., Dorset House, Stamford Street, London, S.E.1), is a useful mileage chart covering most large towns.

General

Let’s Halt Awhile in Britain (price 8s 6d, published by Ashley Courtenay, Ltd., 68, St. James’s Street, London, S.W.1), giving country hotels and inns, especially suitable for the motorist.

A.P.S.O. Handbook (price 3s 6d, obtainable from Hatchards, Ltd., 187, Piccadilly, London, W.1); of interest to those wishing to see country manor houses, castles, etc.

Country Houses (price 5s, published by Country Life, 2, Tavistock Street, London, W.C.2), containing country houses, beautifully illustrated.

Highways of Britain (price 6s 6d, published by Glen Freebairn, Lincoln Chambers, Portsmouth Street, London, W.C.2), with recommended road routes, pocket size.

Ulster for the Motorist (free of charge, from Ulster Touring Agency, 13,

Lower Regent Street, London, S.W.1), a friendly little book, with suggested tours, hotels, restaurants, etc., and map of Ulster.

In Search of a Holiday Hotel (price 1s 3d, by “Bon Vivour,” Daily Telegraph, Fleet Street, London, E.C.4), an excellent leaflet-size book, covering all the well-known scenic areas.

Food and Otherance

Signpost (price 10s 6d, by W. G. McMinnies, from Simpkin Marshall, Ltd., Rosemary Court, Park Road, London, N.W.1)—just the book for the motorist. Written with imagination and good humour, it steers tourists to pleasant ports of call and hotels with character and comfort; contains a special section on Scotland.

The Good Food Guide 1951-1952 (price 5s, published by the Good Food Club, obtainable from Hatchards, Ltd., 187, Piccadilly, London, W.1), containing stringent and refreshing comments on English food and its service, recommends restaurants, gives a map to cover each area mentioned, sections on London, wines.

London—How to Like It

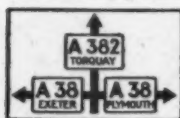
London Nights and Day (price 3s 6d, published by Architectural Press, Ltd., 9, Queen Anne’s Gate, London, S.W.1), illustrated by the cartoonist, Robert Lancaster—a guide to where the other books don’t take you.

How to See London (price 1s 6d, published by George Philip and Son, Ltd., obtainable from Hatchards, Ltd., 187, Piccadilly, London, W.1), a leaflet-size book.

The Good Time Guide to London (price 12s 6d, edited by Francis Aldor, published by G. Harrap and Co., Ltd., 182, High Holborn, London, W.C.1); the title is self-explanatory—I don’t know which you will enjoy more, London or the book.

Eating Out in London (price 1s 3d, by “Bon Vivour,” Daily Telegraph, Fleet Street, London, E.C.4), a leaflet-size book, written with good taste, for those seeking a good meal, at varying prices and places, in London.

The British road numbering system is quite simple. "A" roads are trunk roads, "B" roads are minor roads in good condition. Roads not classified are invariably quite safe for cars unless otherwise stated. The lower the number of a road, the greater its importance as a traffic artery: for instance, A1 is the trunk route from London to Scotland.

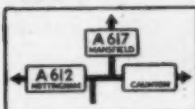


BRITISH ROAD NUMBERING

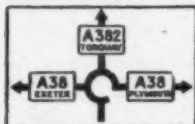
Two trunk roads cross: A38 is the major road.



The road to the right is a minor road, leading to A48. The chequered band surmounting the number signifies a link route.



Here the cross-roads is staggered, and the extension of A612 to the right is merely a minor and unclassified road to Caunton.



In this example the cross-roads is served by a roundabout, and the omission of a section of the circumference to the right indicates that the gyratory movement is to the left, as always on British roads.



Link road to A31, which also enters Romsey.



A158 is running concurrently with A16. As A16 is the major road, A158 is bracketed beneath it.

exchange of travellers' cheques, and there is, of course, also Thos. Cook and Son, Ltd. Americans changing dollars for sterling at a bank can obtain coupons to enable them to make tax-free purchases in shops. Other nationals, and Americans, may make tax-free purchases of goods in the bigger shops which are then delivered to them as they leave the country (or they may be sent direct to their home address).

Tipping

Inevitably, the question of tipping must be discussed. In most restaurants and hotels, 12 per cent of the bill is adequate, and where a percentage is marked on the bill for service charge, no tip is expected or need be given, unless you wish to reward a particularly pleasant and capable service. In garages you need not tip, although it is well to do so in free car parks. The ordinary service station will top up your tank, give you free air and water, and expect no tip, but here again it is a personal matter, and you may wish to reward a willing helper, when sixpence—a "tanner," English slang has it—or at most a shilling, will be sufficient. Certainly you need not—as in France—tip the girl who shows you to your seat at the cinema or theatre. The R.A.C. and A.A. give many

facilities to their overseas members travelling in the British Isles. These, too numerous to list here, include every service from insurance, assistance on the road by patrolmen, a free breakdown service, free legal aid, caravanning, camping and touring information, and the use of road telephone boxes. Details of this overseas membership may be obtained upon application to these organizations' head offices in London.

If you bring with you a letter of introduction from the motoring club to which you belong in your own country, Mr. Desmond Scannell, secretary of the Steering Wheel Club (2A, Brick Street, London, W.1), will grant you honorary membership of this club during your stay in London. Similarly, Mr. A. K. Stevenson, secretary of the Royal Scottish Automobile Club (Blythwood Square, Glasgow, C.2), is pleased to grant to members of recognized overseas automobile clubs the privilege of the use of the clubhouse in Glasgow.

Some motorists from abroad will like to follow a planned journey; others will plan half and leave the rest to fancy, and still more will find in a guidebook a tea-house with black beams and a rose garden, impulsively drive to it, passing, perhaps, cricketers like white tombstones on a village green, and feel—even if they dare not

admit it—that the real England has been found. But also to be discovered in England is the fun of miniature motoring. True, the big arterial roads boast twin tracks, but there are few stretches where the borders of a straight road meet distantly ahead. The country is grooved with twisting lanes, shadowed in summer by an arch of green. Frequent gear changes are often needed, and good cornering, for the lesser lanes of England—often surprisingly well-surfaced—will find any defects in cornering that a car may have.

Petrol stations are not usually far apart. Many service stations remain open until late evening in the summer months, opening also on Sundays, and outside, as well as inside, large cities and towns there are some that do not close throughout the night. Although there are branded oils, England since the war has still been unable to bring back to the market branded petrol. The Pool mixture in use, obtainable from all petrol stations, is of a reasonable quality, of 70-72 octane rating, and most cars of average compression ratio run efficiently if not ideally on it.

Food

When even a motorist eats two, and often three, meals a day, the problem of food must be of an almost equal importance to that of petrol. And while English cooking is a too self-conscious subject for me to indulge it here, I can tell you of a few books written recently that will almost ensure a good meal. The *Good Food Guide* (price 5s), published by the Good Food Club, especially attacks the difficulty with a wonderful zest; it makes good reading, whether you "eat from it" or not. An overseas visitor, if he stays at an hotel, will not require a ration book for the first thirteen weeks of his stay in this country. Incidentally, I almost forgot to mention that food rationing is still at large in England and Scotland, although Northern Ireland and Eire are free of it. A local food office will give you a sweet ("candy") ration card, with which you will be able to buy a set quantity of sweets each month, and, in addition to this, each foreign visitor to the United Kingdom is given an extra sweet ration of 2 lb in weight per calendar year. The central office for queries on food rationing problems from overseas visitors is 10, Cork Street, London, W.1.

Of the British I would not venture to write; 700,000 people (12,000 with cars) visited, from every part of the world, Great Britain last year, and I like to think that they took away with them as many different ideas of the British. Advice on a holiday must always remain inadequate. Imagination and a tremendous humour are needed for a motorist to enjoy his holiday in England—the humour and imagination that an Englishman needs if he is to enjoy a holiday abroad.

C. S.

NEWS and VIEWS

Turin Show

AS usual the Turin Show, which opened last Wednesday, includes a wide variety of British cars. The Rootes Group, for example, is exhibiting a Humber Hawk saloon, a Hillman Minx saloon and convertible coupé, a Sunbeam-Talbot saloon and special engineering exhibit. The Show closes on May 4.

Dogs on the Highway

IN 1951, 1.48 per cent of personal injury accidents were attributed by the police to dogs in the road. The figure was given by the Minister of Transport.

Pegasus

THE illustration of the Pilot Pegasus caravan, on page 289 of *The Autocar* of March 7, was incorrectly captioned. This model is made by M. R. Pascall, Ltd., and not by the Paladin company.

Wallace B. Phillips

AFTER a prolonged illness Mr. Wallace B. Phillips, founder and chairman of the Pyrene Co., Ltd., died in New York on April 14. Apart from his



Mr. Wallace B. Phillips, C.B.E.

close connection with industry and the Government, Mr. Phillips was a founder-member of the Royal Society for the Prevention of Accidents, president of the American Chamber of Commerce in London, and a director of the Avon India Rubber Co., Ltd. Awarded the C.B.E. in 1951, he also held the King's Medal of Merit.

Finland's Car Show

ALTHOUGH small by comparison with other European car shows, the Finnish example in Helsinki, which opened on Tuesday, April 22, is truly international and a brave show for a small and not too wealthy country. Manufacturers are represented from both sides of the Iron Curtain, among the unfamiliar car names being the Pobeda and the Donau. Germany leads in the Finnish market, with the United Kingdom second. British and American exhibits outnumber the rest, and all 1952 models are on view. The interest in the exhibition shows that the Finns are car-minded.

The show, which is an agents' exhibition, will be fully described in next week's issue of *The Autocar*.



The first Lanchester Leda leaves the production line at Coventry this week. Welcoming the new model are (left to right) Mr. C. M. Simpson, chief engineer, Mr. J. Smith, works manager, Mr. W. E. Hilton, export manager, Mr. J. L. Jennings, sales manager, and Mr. R. B. Cole, deputy managing director. The new 2-litre steel-bodied Leda is being made solely for export.

NEW LANCHESTER LEDA FOR EXPORT

A NEW pressed-steel version of the 2-litre Lanchester is now in production. Called the Leda, it will be sold only in export markets. Outwardly the car is like the Fourteen, but the construction gives it an all-steel shell more suitable for overseas conditions than the composite coachbuilt Fourteen body.

In the Leda, which also has the advantage of being lighter than the Fourteen, no wood at all is used in its construction, for even the fascia and window fillets are of steel, cleverly grained to be virtually indistinguishable from the real wood employed on the Fourteen, which remains unchanged for the home market.

The chassis, with its 60 b.h.p., 2-litre

four-cylinder engine, fluid flywheel, pre-selector gear box, and laminated torsion bar i.f.s., is identical on the two models. The new Leda body shells are made by the Pressed Steel Co., Ltd., of Cowley, and they are painted, trimmed and finished in a new section of the Daimler and Lanchester Coventry works. Incidentally, intensive reorganization and the making good of extensive war damage have been going on at the works during the last few months.

As shown in the accompanying illustration, the first Leda was driven off the assembly line by Mr. R. B. Cole, deputy managing director of the Daimler and Lanchester companies, last Monday, April 21. With the exception of certain



In appreciation of a gift of \$9,000 worth of timber from the inhabitants of Belgrade, Yugoslavia, for use in the reconstruction of Coventry, the people of Coventry are presenting Belgrade with this Humber Pullman limousine as being symbolic of Coventry craftsmanship. It is a replica of the city's mayoral car.

individual cars for various countries, the first batch will go to Brazil. Production is, of course, limited by the supply of raw materials, full capacity being 200 cars a week.

New Additive Oil

AN additive oil called Havoline has been developed by the Regent oil company, and the sales campaign for the new product is responsible for the addition of the word "lubrification" to the language of the poster. The neat telescoping of "lubrication" and "protection" does, however, express the purpose of the new oil, which will be available from April 30.

Havoline is produced in four S.A.E. grades—20W, 30, 40 and 50—and will be obtainable from service stations all over the country; the customary manifestation of additive use will be evident after its employment. Dipsticks appear dirty owing to the contaminants that are held suspended in the oil instead of coagulating on internal walls and passages. A drain, flushing and refill should be the routine for the change from ordinary to an additive oil such as Havoline.

Frank Applebee

FRANK APPLEBEE, chairman and managing director of Godfreys, Ltd., died on April 20 at the age of 64. He was best known for his activities in the world of motor cycling, for apart from his busi-



This striking new experimental convertible, called the C-200, was recently unveiled at a ceremony in New York by the Chrysler Corporation. It uses the Firepower V-eight engine, and the body, which was designed in Detroit, was built by Ghia, in Italy. The C-200 is a further experiment to explore the blending of sports styling with practical design and engineering in body and chassis.

ness connections with this field he won the Senior T.T. in 1912. He was the son of F. W. ("Pa") Applebee, of Levis fame, and first appeared in motor competitions in 1907.

His business connections with cars included ties with Kingston Hill Motors, Ltd., and King and Taylor, Ltd., of Godalming, Surrey.

New Ferry

ON Easter Monday, Silver City Airways opened a new air ferry service between Southend and Ostend. This was the third British air ferry to be started since the war. For a small car carrying four people—an ideal case—the fare is £15 return per head.

NEW CAR DELIVERIES: Stopping Up the Loopholes

MEASURES to block the loopholes in the allocation of new cars, forecast at the beginning of the year, have now been announced by the associations concerned¹; they will come into effect on May 1.

The chief instrument in the new developments is the institution of an Agreement and Declaration between the customer and the British Motor Trade Association in which the details of car ownership and necessity are laid bare to an unprecedented extent in commercial transactions, and the industry and trade must feel considerable misgivings about the ultimate effect on goodwill of this regimentation of people whose only desire is to exchange legal tender for consumer goods. The customer, be he individual, company or firm, or fleet user, having made public his motoring possessions and aspirations, the dealer then signs a section which begins: "I hereby approve of delivery of the following car being made to the above customer."

Common law will be used to punish a breach of agreement on the part of the customer, while the dealer conniving or independently offending is liable to the sanctions applied by the associations to their members. The penalty to the customer is likely to be at least the setting aside of the sale. The completed agreement is forwarded, with the Covenant, to the B.M.T.A. for scrutiny.

The following makes of cars are subject to the rules: Allard, Alvis, Armstrong Siddeley, Aston Martin, Austin, Citroën, Daimler, Dellow, Ford, Frazer-Nash, Hillman, H.R.G., Humber, Jaguar, Jowett,

Lagonda, Lanchester, Lea-Francis, M.G., Morgan, Morris, Renault, Riley, Rover, Singer, Standard, Sunbeam-Talbot, Triumph, Vauxhall, Wolseley.

It is worth noting, therefore, that the omissions are: A.C., Bentley, Bristol, Connaught, Healey, Jensen, Marauder, Rolls-Royce, Russon.

The second provision of major importance concerns the date of order, which is given new importance. Subject to the priority that already exists for certain classes, orders will be executed in date order according to the list of the dealer concerned. The statement issued by the Associations goes on to emphasize that the left-overs from the priorities will be "small," and the spokesmen of the S.M.M.T. could not enlarge further on the adjective, but it is plain that, if allocations keep to the figures given by the Government (60,000 this year)—something that has not yet happened, be it noted—the number will be practically negligible.

Old Post-war Cars

Some small improvement may be possible for a year or two while early post-war cars can still be kept in economic repair, but it must be remembered that 1946 models, for instance, are now six years old, and can well have covered 60,000 miles. At some stage, in fact, the doctor's car must be replaced for the sake of reliability in crisis.

Two other new provisions are important. A dealer must return a deposit if requested for any car other than one for which special bodywork is being made, or one costing over £1,500, including purchase tax, if he is reasonably certain that

delivery cannot be made within six months. The return of the deposit does not, of itself, cancel the order.

Demonstration cars cannot be allocated to any employee of a dealer without the written consent of the manufacturer, nor can such a car be resold without the consent of the manufacturer and then subject to price conditions and including a Covenant for the balance of the two-year period since first registration or for one year, whichever is the greater.

One or two points of detail interest emerge from the new regulations. The rule governing deposits is retrospective as regards their placement with the dealer, and the dealer is bound by request for return dated after May 1.

The B.M.T.A. was not previously a party to the declaration of circumstances and need, but becomes such under the new rules.

The arbiter of need is the dealer, as the only possible one.

Scotland and Northern Ireland are included in the scheme. An investigation into very early orders—assumed to be dated 1946—is proceeding amongst the volume manufacturers and such action as may be practicable is to be taken to clear up the outstanding ones.

The Associations reiterate their regret at the imposition of further rules on their customers and point out once more that the only complete solution to the problem is an increase in the number of cars available. A spokesman of the retail side of the industry took the opportunity of the introduction of the new rules to stress that the retail and distributing side of the industry fully concurred in all the measures taken.

¹ The Society of Motor Manufacturers and Traders (S.M.M.T.), The Motor Agents Association (M.A.A.), The Scottish Motor Trade Association (S.M.T.A.), and the British Motor Trade Association (B.M.T.A.).

Disconnected Jottings

BY THE SCRIBE

Drawings by Barry Appleby

Links in the Chain

NOW and again one gets a vivid reminder of the extent to which our motoring, vital occasions included, is in the hands of those good friends of all of us, the component suppliers. Also, of course, the manufacturers' own reputation is in a quite large degree in their keeping, for an owner who has a coil, a petrol pump or a speedometer die on him more often than not blames the car maker, and such occurrences are notched in his memory as black marks against the make of car concerned. Touching wood, on all the cars I have owned and driven I have never had a coil fail. Now and again



Fated electrically.

a speedometer has gone dead, but an occurrence the other day that led to these thoughts was electric petrol pump failure, incidentally on an expensive car.

The circumstances were lucky in that I had not left base and a replacement came immediately from the factory. But by extraordinary chance the second pump failed within 20 miles—again, luckily for me, in fortunate circumstances. Pretty clearly the replacement must have come from the same batch in the factory stores and a fault applied presumably to several pumps in the same batch.

Now fuel feed failure on an otherwise hearty car is an unfortunate thing, even though, if it is merely a case of sticking contacts, it may be possible to proceed in jumps of about 300 yards at a time by making and breaking the circuit by hand with the lead at the terminal. This energizes the diaphragm sufficiently to get some petrol to the carburettor.

I am not meaning to be alarmist in this matter, for I have regularly used an electric pump for nearly five years without any snag developing.

♦ ♦ ♦

Hair Chance

SO much, indeed, does one depend for peace of mind and on keeping one's appointments on a strand of wire not much thicker than a hair. That

same car must have been fated electrically, for twenty-four hours later its horns went out of action. No fuse had obviously blown to give the usual evidence of blackening within the little glass cylinder. The circuits were not marked in any way within the fuse box, but juggling with the spare and presumably sound fuses in the various positions apparently restored the circuit, which, incidentally, carried with it the roof light but no other accessory.

Next time the horns were wanted they had gone again, however, so we were back at scratch, with in all probability a loose connection responsible. That was a matter fairly readily solved, though diagnosis was not aided by the way the modern manufacturer is apt to tuck the horns in under somewhere, in this case the wing crowns. The final explanation proved to be the bad contact of a fuse in its clips; a matter righted with a touch of emery cloth.

That one fine strand of wire, the fuse, in trouble, and for all it is worth one might as well not have a motor car for the time being. This does not add up, however, to railing against components, but to a reminder inversely supplied of how well they serve us nearly all the time.

♦ ♦ ♦

On the Beam

FOR an unnerving experience let me recommend the head light coming from an entirely unexpected direction on a familiar route. I was travelling quite fast along a straight that I know like the back of my hand when I was startled by the light, fairly close, coming in at right-angles from the right. For a moment I was confused. There was no road there, I knew, or—horrors—was there a road there that I had passed by for years without noticing? Perhaps I was not on my familiar route? Once fantasy enters a journey there is no limit to such conjectures.

The light and I slowed, and as I passed the spot a motor cycle turned gently out into the road and set off in the opposite direction. Next morning I examined the spot, and there was a woodland path skirting a bush about four yards back from the road and



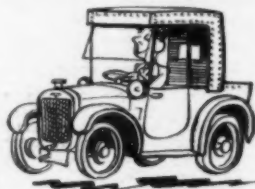
Unexpected direction.

meandering off into the trees, along which the motor cyclist had come. How the unexpected can happen, even in the best-known journeys.

♦ ♦ ♦

Home-brewed

THERE is always something attractive about the home-built body, which is appearing in numbers these days, especially the more ambitious ones where desire hath outrun performance. My own favourite is the venerable Austin Seven which has grown a fixed head two-seater coupé body. It is somewhat angular and the sheet metal is fastened by rows of ex-



Somewhat angular.

tremely prominent rivets with round heads. Can you imagine a cross between an Austin Seven and a Victorian battleship? But it is strong, and, I am sure, snug.

Another small car I know has been a tourer, then a coupé, then a cabriolet and is finally to be, in the owner's old age, a saloon. Out with the Perspex, the aluminium, the Bostik, the string and the rivets! You too can . . .

♦ ♦ ♦

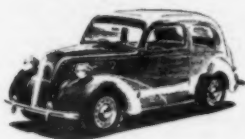
No Totals

WHENEVER I mention total mileage or trip recorders the Editor tends to give me a reproachful look, because he knows my weakness for paying no attention whatever to the trip, and using the total mileage recorder only to tell me when my car is due for greasing. However, I claim to make up for my dereliction of mathematical duty in these respects by my reliance on the m.p.h. reading. The subconscious judgment of fast corners includes, for me, the invariable glance at the speedometer to see that my calculation is supported by the figures, and the process of reasoning on each bend seems to be something like this: "This is a fairly easy one—wide, clear, no telegraph posts on the outside, and the camber is in the right direction. Should get round at about fifty. Should think we are doing fifty right now. Are we? Oh yes. That's fine." And round we go.

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Your Ford Dealer can give you full details of the Anglia, the Prefect, the Consul and the Zephyr-Six: get in touch with him.

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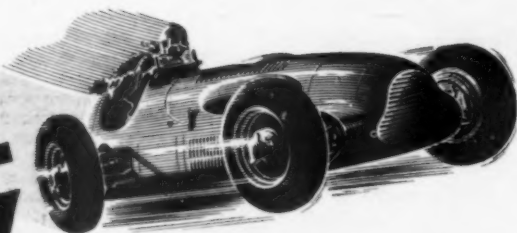
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FUEL BY SHELL

Modernizing a Prefect

DEVICES TO IMPROVE EFFICIENCY

by J. Verney, A.M.I.C.E.



The evergreen Ford Ten—its 1946 version.

WHILE waiting patiently for my new car I decided to modernize my recently purchased 1946 Ford Prefect and thus have a foretaste of things to come. The various items were accordingly tackled in turn, the work being spread over a period. Many motorists seem to enjoy dressing up their older cars with such modern features as bumper over-riders, but perhaps the following are more useful ideas.

The life of some steering wheels is all too short, particularly the painted kind. After experimenting with a wheel glove I eventually decided to replace my wheel with the modern spring-spoked version, as fitted to the latest models. At the same time the enamelled Trafficator knob was changed for a new chromium-plated one. At 35s I consider the change definitely worth while if only for the increased driving comfort resulting from the larger diameter and the better feel of the rim. The ammeter, too, is now more readily visible from the driving position.

Fitting the wheel is not too difficult a task for the owner-driver, but it is

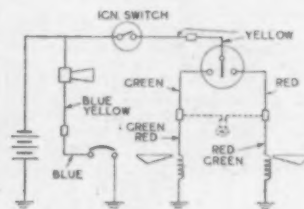
necessary to get underneath the car to loosen the clamp before withdrawing the stator tube carrying the horn and Trafficator assembly. The old wheel being scrap, a few taps under the centre with a hammer will loosen it if you are unable to borrow a "wheel-puller." In substituting the new wheel care must be taken to set correctly the finger which operates the self-cancelling mechanism; this should point vertically downwards when the front wheels are set to straight ahead.

Tell-tale

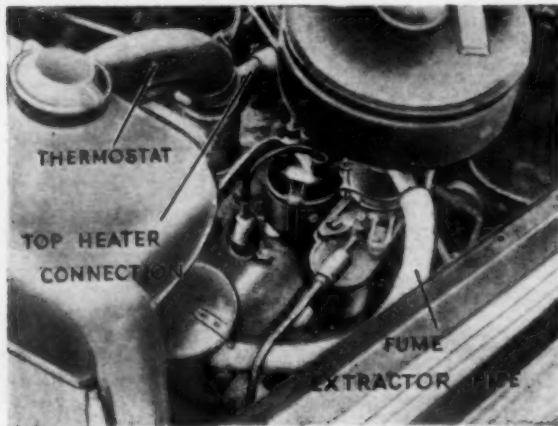
A warning lamp on the facia to indicate whenever the Trafficators are out is a most useful refinement. There are four wires from the bottom of the steering column, all ending in simple push-fit connectors. One of these is from the horn button, another is from the centre of the Trafficator switch and the two remaining go to each Trafficator. My wires were old and the tracers undetectable, so I found the two latter connectors by unplugging each in turn and checking the operation of the horn and Trafficators. To each of these I

joined a length of flat twin flex which I led through the bulkhead to a red indicator lamp. I used a 1s cycle dynamo bulb, 6-volt, 0.5-amp, M.E.S. cap, mounted in a 2s 6d Bulgin Miniature Signal Fitting No. D170 from the local radio dealer. This was secured to the facia after drilling the necessary 1/16 in hole with a geared breast drill. The appearance is neat and no longer do I now have to rely on the self-cancelling mechanism, only to find later that I have driven half a mile with one of the indicators out!

A thermostat is available for about



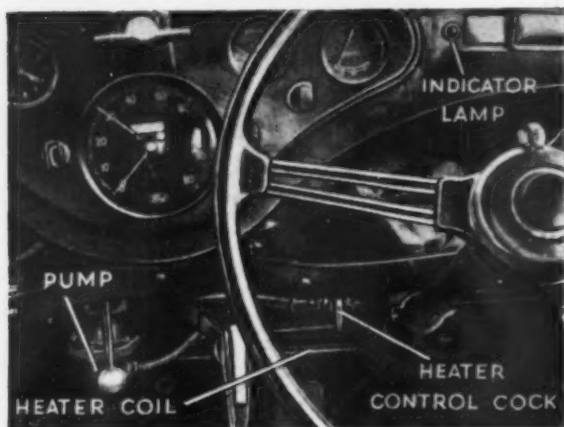
Wiring diagram for the incorporation of an indicator light in the Trafficator circuit.



A familiar under-bonnet view of the well known Ford engine, indicating some of the author's modifications. If an air cleaner is not fitted, the fume extractor pipe can be taken through the cover plate of the carburettor air intake.

15s from Ford's, which is designed to work in the top radiator hose. This installation is very simple for the owner himself, but the new type of hose must be used and care taken to see that the expansion bellows lie in the bulbous part of the hose. The thermostat is secured by an external hose clip. In re-making the joints a coat of jointing paste is recommended. I tested my thermostat, before fitting, by bringing it to boiling in a saucepan of water. I found that it did not commence to open until practically boiling point (about 170 deg F), and then it opened very rapidly. In use I find that the butterfly valve begins to open and the header tank commences to warm after less than a mile of running. One has then the pleasures of driving behind a fully warm engine in the shortest possible time; the choke is hardly needed and the engine stays hot for much longer periods than before. Engine wear is reduced and petrol saved, and a radiator muff is no longer required.

Modernizing a Prefect continued



Positions of the windscreen washer pump, interior heater and control and Trafficator warning light. Also shown in this illustration are the new, modern steering wheel and the elegant Trafficator switch.

Anti-freeze solution should be used, however, in the radiator.

The commercial interior heater being fairly expensive it is quite possible to fabricate one's own. I used a length of $\frac{1}{2}$ in soft copper tube (from a plumber's merchant), zig-zagged to and fro beneath the shelf and secured to the steering column with clips at the same angle. A large bore plug cock (chromium plated) was inserted

top connection to the header tank must be as high as possible, but if a thermostat is fitted then the T-off must go immediately below the thermostat. Two cuts were made in each hose, $\frac{1}{2}$ in apart, using a hacksaw and knife, and both Ts were slipped into position without the necessity of breaking the end joints. All connections on the radiator and heater circuit were secured with hose clips. After filling the radiator in the usual way, the air must be bled off by loosening the plug in the control cock and releasing about a cupful of water. If you have anti-freeze return this to the header tank!

This heater works extremely well, solely by thermosiphon circulation, and provided the windows are kept nearly closed allows driving in all weathers without gloves. The heater can be turned off by means of the cock when not required.

Anti-Smell Pipe

It is a pity, but engines when stressed begin to smell (owing to blow-by past the pistons) long before they have reached the end of their useful life. With my engine I have managed to obviate the trouble by connecting a $\frac{1}{2}$ in pipe from the crankcase breather (the oil filler) to the air intake. The oil filler pipe was knocked off (it is a push fit) and a short length of $\frac{1}{2}$ in pipe welded on. A T-joint was made, similar to the heater hose connections, and brazed on to the base of the air cleaner. The two were then interconnected by means of a short length of hose.

If an air filter is not fitted the pipe should be led through the cover plate over the carburettor air intake

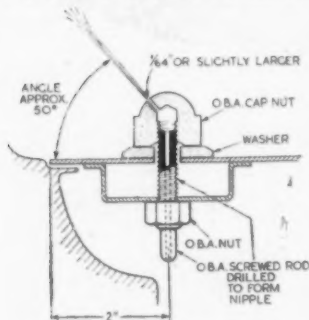
to serve the same purpose. Thus my engine now consumes its own fumes which at the same time provide free upper cylinder lubrication! A simpler alternative is to lay the pipe down and under the car.

Screen washers are becoming more popular and are very useful at certain times. I made mine by getting a watchmaker to drill out two chromium plated cap-nuts which I fitted to the scuttle with o.b.a. screwed rod and nuts. The rod was drilled out for the water passage and filed down to form a nipple to take the rubber windscreen wiper hose used for feeding the water from the reservoir.

The small T was purchased from a pet-shop selling aquarium fittings. As an alternative only one cap-nut might be used, drilled with two holes to serve both wipers. The onward rush of air, towards and over the screen, does not seem to have any appreciable effect on the angle of the jet; the hole was therefore drilled to throw the water to the top of the screen. The hole needs to be very small, about $1/64$ in or slightly larger.

The water for the washer is drawn from a glass jar under the bonnet (radiator water would be too rusty) by means of an old petrol pump screwed underneath the shelf. The original engine actuating arm was fitted with a knob and the pump throws water on the spring-loaded return of the diaphragm. Originally I intended to use a "squirty" oil can, if the working parts were rust-proof, and there is on the market a suitable disinfectant hand spray for about 7s 6d which could no doubt be utilized. Proprietary anti-freeze should be used in the winter.

A puncture on a dark rainy night is bad enough, but what if the spare tyre is also flat? A 3s 6d replacement foot pump hose connection was purchased and screwed to the spare tyre in its compartment, whilst a Schrader valve from a scrap inner tube was connected to the free end and inserted in the door enclosing the spare wheel. Thus all tyres can be pumped with the minimum of inconvenience.



A cap nut modified and drilled to serve as a windscreen washer nozzle.

at the highest point and both ends were led off with $\frac{1}{2}$ in reinforced rubber hose. Drilling the bulkhead proved to be the most difficult job and I was thankful to have the loan of an electric drill for this task! The two Ts were made from scraps of copper pipe, bronze-welded locally, and these were inserted into the top and bottom hose connections. I decided it would not be safe to use soft soldered joints. The



A.1 exterior pumping-up point for the spare tyre overcomes the temptation not to bother about this tyre when checking pressures. It was made for 3s 6d.

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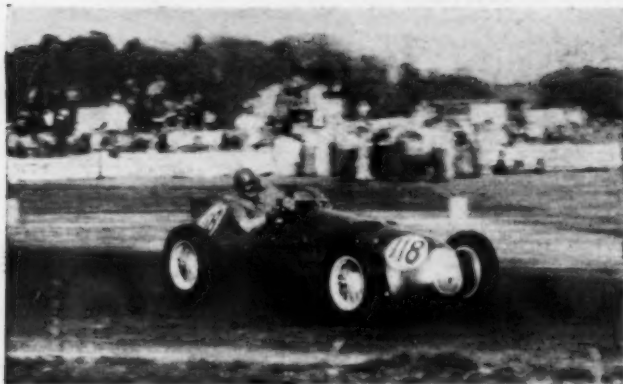
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Duncan Hamilton, trying very hard, takes the H.W.M. round paddock bend in a proper four-wheel drift, with no appreciable steering lock in either direction.

Excellent Ibsley

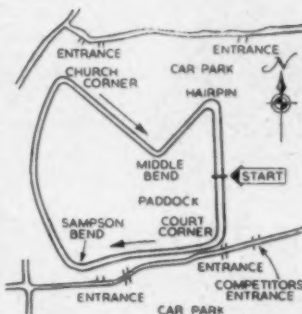
ANOTHER COOPER-BRISTOL SUCCESS

SO far this season, motor racing in this country has been extremely fortunate with the weather; last Saturday's race meeting at Ibsley airfield, near Ringwood, Hampshire, was run off in brilliant sunshine, the warmth of the day being just sufficiently tempered by a slight breeze. And a very good day's racing it was; a considerable crowd of spectators was well rewarded.

The Ibsley circuit comprises something like three sides of a square, with a V-shaped fourth side; this gives scope for both fast and slow corners, of which the slowest (at the hairpin) is distinctly tricky. The surface is slightly bumpy, and inclined to be slippery, especially at the end of the day; but although several cars slid off the road, no accidents resulted. The long programme was run off in excellent time, and the West Hants and Dorset C.C. gave a very competent display of organization.

The racing could be divided fairly easily into three groups; the first comprised scratch and handicap races for sports cars, including a Vintage sports car race and a Bentley handicap, the second a formula 2 race, a *formula libre* race and a general handicap—many cars competing in all three—while the third consisted of the two heats and final of the formula 3 race. The Vintage race was dominated by Bentleys, and a fine sight they made, thundering around the circuit and disturbing clouds of dust in a manner reminiscent of motor racing twenty-five years ago. H. J. Wilmschurst, with the ex-McKenzie 4½-litre, and G. G. McDonald in a similar car, had an intense duel which ended in victory for the former, who scored third place in this race as well as a second in the Bentleys-only event, putting up the fastest lap on both occasions.

In the 1½-litre sports car race, the newly formed "Monkey Stable" of Lester-M.G.s took first and third places, J. C. C. Mayers and G. A. Ruddock driving, while Cliff Davis' very fleet Cooper-M.G. was for once beaten into second place. The scratch race for larger sports



Ian Stewart's Ecurie Ecosse Jaguar leaves a trail of smoke from the inside rear tyre as it accelerates away from paddock bend. Now turn to the picture on page 530!

cars, subdivided into over and under 3-litres, provided victories for Sydney Allard's Cadillac-Allard, which defeated Oscar Moore's H.W.M.-Jaguar and Ian Stewart's Ecurie Ecosse Jaguar, and Dennis Poore in the DB3 Aston Martin, which soundly trounced the Frazer-Nashes of Salvadori and Peacock. The unlimited sports car handicap brought M. W. Head's white XK120 Jaguar to the fore, in front of W. B. Black's similar car and David Lewis' supercharged Monza Alfa Romeo; Ian Stewart put up fastest lap, but was handicapped out of the picture.

Kieft Again

The formula 3 race was, as usual, a very hard-fought affair. In the first heat, the Kiefts of Headland and Loens did battle with Habin's Erskine Staride; Loens obtained the lead after two laps, but then a locking front brake caused him to slide off at the hairpin. Here he caught an oil drum, and pushed it in front of the car all the way up the straight before wriggling clear of it at paddock bend. Meanwhile Headland and Habin had passed, to finish in that order; Don Parker oiled a plug in his Kieft-J.A.P. and coasted in, but when he let the clutch in before coming to rest he found the car was still in gear. The engine spun over again and fired, so he rejoined the race, to finish sixth. In this heat, Loens set up a new 500 c.c. lap record at 71.9 m.p.h. (1m 44.8s). The second heat, slightly hectic, was all Don Truman's, who led throughout in his new Cooper; J. Coombs and M. Barclay followed him home. A. P. Hamilton, once well known at Brooklands and other circuits with M.G. and Alfa Romeo cars, returned to racing with the second Ecurie Briannique Cooper, but had the misfortune to oil a plug.

In the final, Coombs led from the line, but misjudged the first corner and slid into the straw bales. Meanwhile Habin, Loens and Headland fought hard for the lead, the Erskine holding it for the first lap and a half before first one Kieft and then the other scrambled past. Headland then led with Loens sitting on his tail; and this time it was Headland's turn to slide off at the Hairpin (though without collecting a drum), and Loens took the lead. This order persisted for some laps, and appeared final; but nothing is ever certain in racing, and Loens suddenly found himself without any transmission—the gear

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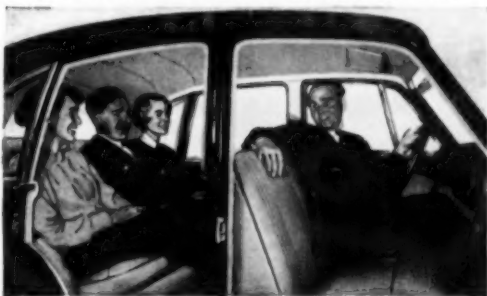
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Below left: Cutaway picture of the actual fluid flywheel. In this transmission there is no rigid mechanical connection; a fluid cushioning effect between engine and roadwheels gives utmost smoothness of drive and gear change. **Below right:** Fresh air conditioning with built in heater and ventilating fan. Fresh air circulated, heated or unheated. Control from dash.



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A traditional Jaguar radiator grille is still found on this model. Twin built-in fog lamps are mounted below the head lamps, and the side lights are faired into the wings. A substantial bumper, with overriders, gives good protection.



From this angle the car has a particularly pleasing appearance. The sweep of the roof panel blends well into the slope of the tail and the curved rear window maintains a uniformity of line.

ROAD TEST

continued

who want to travel fast, yet in complete comfort, and at times with a great deal of luggage.

On one occasion an average speed of 46 m.p.h. was obtained over a distance of nearly 130 miles on an unfamiliar road, without making the car (or the driver) work at all hard. Under still more suitable conditions there is little doubt that considerably higher averages would be possible. A great thing about the Jaguar is its willingness for work, and it makes very light of going fast. In fact, it goes quite a lot faster than some cars of a similar body size with an engine of around 5 litres.

Top Gear Performance

The car under test had the optional 8 to 1 compression ratio; 7 to 1 is standard when only poor grade fuel is available. On 80 octane fuel the engine is very smooth and there is only a very slight trace of pinking—just enough to show that the ignition is not late. There is good bottom end power, too, and, should the driver wish, the car will accelerate smoothly from as low as 10 m.p.h. on top gear. It can be very much a top gear car; yet, with different handling, responds well to use of the gears. The engine is quiet mechanically and there is very little exhaust noise. What noise there is suggests power and not an inefficient silencer system.

In keeping with the general performance, the hill-climbing is very much above average. All normal main-road hills can not only be climbed on top gear, but climbed fast, too. Third gear will cope with most of the steeper

ones, while several renowned hills in the West Country, with gradients around 1 in 4, were easily climbed without changing down to first gear, except on one occasion when the car was balked and it was necessary to slow down and almost to stop.

Road holding and general handling qualities are well up to the high speeds made possible by the engine performance and body shape, and this is one of those cars that the driver feels he really gets to know, and to like very much, very quickly. Although perhaps a little transatlantic in its number of turns from lock to lock the steering is very positive, with no vagueness about it at all, and the full number of turns (4½, to be exact) did not become apparent until it was actually measured. In spite of this ratio the steering is not particularly light for confined manoeuvring purposes. However, at both normal and high speeds the steering feels right. The general tendency for the Jaguar to understeer further inspires confidence.

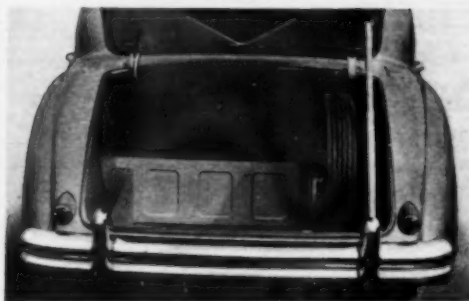
Gear changing by means of the centrally placed remote control lever is light and positive, yet it would be better if the actual amount of lever travel were reduced slightly. The synchromesh is smooth and effective, though it is not difficult to beat the mechanism if a snappy change is made. The clutch, with a hydraulically operated withdrawal mechanism, is smooth to operate, if perhaps a little heavy if kept depressed in traffic blocks as distinct from waiting in neutral. The pedal must be pushed right down to ensure a silent engagement of first gear.

Over all types of road surface the riding is very good. There is no pitching, nor has the suspension a "sick



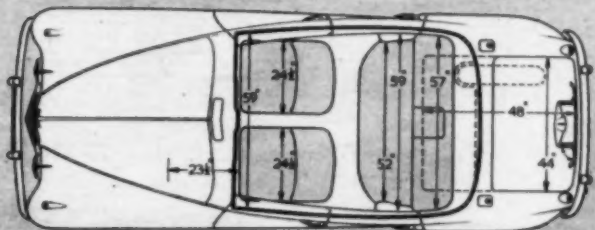
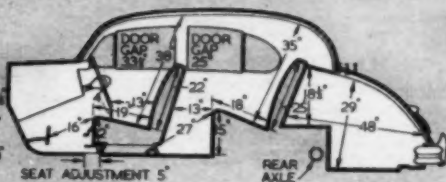
Large, comfortable separate seats with adjustment for leg room and height are fitted in the front. The steering wheel is telescopically adjustable for reach. The hand brake lever is placed ideally between the seats. The interior is simply yet tastefully trimmed in fine leather and polished wood. (Inset) Small tools are carried in flush-fitting holders incorporated in the bottom of the front doors. The rear compartment is comfortable and very spacious. The floor is virtually flat. A pull down central armrest is fitted, and armrests are attached to all the doors. Ashtrays are embodied in the cappings of the rear doors—a convenient arrangement.





By placing the petrol tanks in the rear wings of the Mark VII it has been possible to provide an exceptionally large luggage locker. A flush-fitting filler cap is provided for each tank.

WHEELBASE 10' 0"
FRONT TRACK 4' 8"
REAR TRACK 4' 9 1/2"
OVERALL LENGTH 16' 4 1/2"
OVERALL WIDTH 6' 1"
OVERALL HEIGHT 5' 3"



Measurements in these 1/16 to 1/8 scale body diagrams are taken with the driving seat in the central position of fore and aft adjustment and with the seat cushions uncompressed.

making " softness associated with some types of springing. There is very little roll on corners. Over particularly bad surfaces such as Belgian *pave* the car remains completely controllable, and no undue noise is transmitted to the body interior.

The brakes are unusual in that they employ the two-trailing-shoe system, hydraulically operated and with vacuum servo assistance. Both front and rear drums are of 12in diameter. The use of a servo mechanism enables effective retardation to be obtained with only a moderate pedal pressure and it is claimed that the two-trailing-shoe system is less susceptible to temperature variations and loss of balance. During the severe conditions imposed during performance testing a little brake fade was experienced, but at no time was there any loss of balance, or pulling to one side, when the brakes were applied. Under braking, a certain amount of tyre squeal occurs, especially if the pressures are not set at the higher figures recommended for sustained fast driving. As the servo effect is dependent on the rotation of the engine, a partial loss of braking efficiency is experienced with the engine stalled, as happened on one or two occasions, although useful braking remains.

Driver Amenities

The driving position in the Mark VII is very good and the separate seat is adjustable for both leg length and height. The seat itself is well sprung, with a soft overlay beneath the leather upholstery, and of ample dimensions to ensure support to both the back and the leg muscles. Steering wheel position can be adjusted by means of a telescopic steering column. From the driving seat there is a good view of the road ahead and it is possible to see the left-hand front wing in a right-hand drive car. To facilitate manoeuvring in a confined space at night two small red inserts are provided in the side lights, which enable the front corners of the car to be pin-pointed. The V-type windscreen is well raked and there is no very large blind spot at the screen pillars.

The pedals, which are unusually long and narrow, are well placed, but the throttle is rather far forward relative to the clutch and brake and this renders the heel-and-toe type of gear changing a little difficult. There is plenty of room to the inside of the clutch pedal for the driver's left foot. All the minor electrical controls are well spaced around the instruments on the fascia panel. With right-hand drive the controls for the built-in fresh-air heating and ventilating unit are a little far away for operation when in motion. A similar remark applies particularly to the supplementary ventilator flaps placed in the scuttle panels by the side of the driver's and passenger's feet. The two central air inlet flaps of the main heating and ventilating system are opened by levers placed on the underside of the scuttle, above the gear box housing.

One feature seldom found on cars of post-war design is a sliding roof. This is completely flush fitting externally when closed, and when it is open it ventilates effectively

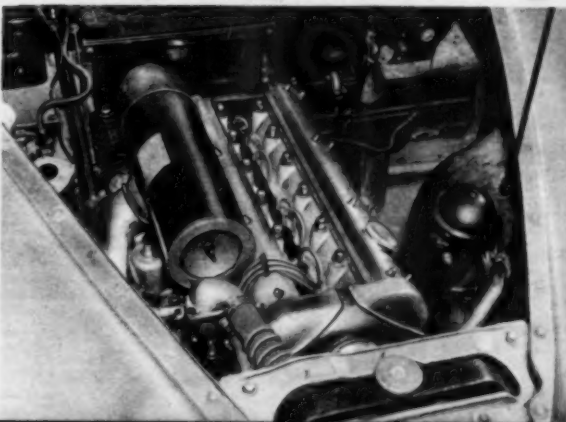
without causing an undue draught. There is a particularly large luggage locker, and it is of a useful rectangular shape with no internal protrusions, with the exception of the spare wheel, which is vertically mounted on the right-hand side. The luggage locker floor is particularly low. This is made possible by the use of twin petrol tanks mounted in the rear wings, either of which is used independently by means of a change-over switch.

The faired-in head lamps are very powerful and have a good spread of light, yet for a car with the speed potential of the Jaguar an even longer range would perhaps be advantageous for fast night driving. Two fog lamps, which also are built in, are arranged below the head lights. These are controlled by an extra position on the light switch, which switches off the head lamps and switches on the fog lights, a very convenient arrangement. The horns have a pleasant note and are very effective. The horn button is a little stiffer to operate than some; this is perhaps a good feature, as it prevents inadvertent operation. The instrument lighting is very effective, yet some form of dimming device for it would be advantageous. A useful map-reading light is fitted on the fascia, and this is also switched on automatically when either forward door is opened.

Starting from both hot and cold was very good, and the mixture enriching is operated automatically.

Considered from any angle, the Mark VII Jaguar is an outstanding car. It has extremely good performance, is very comfortable to drive and to ride in, is very completely equipped, has a modern yet dignified appearance, and is very good value—indeed, it is in that respect phenomenal.

The celebrated 3-litre twin overhead camshaft engine occupies a well-filled compartment. A bulkhead mounting for the battery is provided behind the tubular air cleaner. Also on the bulkhead, to the right of the battery in the photograph, is the heating and ventilating unit, while to the left is the voltage control regulator and fuse box.



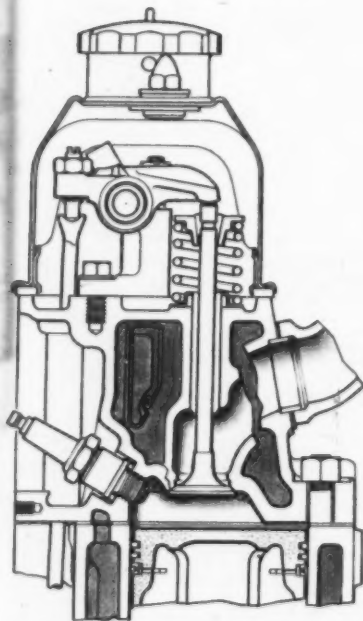
NEW CARS DESCRIBED

New Engines for Vauxhall



The new Velox engine exhibits the cranked inlet manifold which is common in American design but rare in Europe. The object is to maintain a horizontal line when the engine is installed in the car. Underneath the dynamo is the by-pass oil filter bolted direct to the crankcase.

HIGHER POWER AND LOWER CONSUMPTION FROM WYVERN AND VELOX

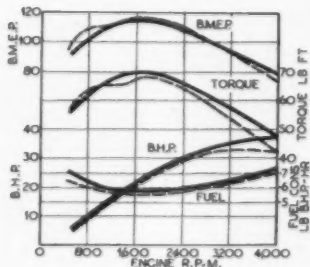


A cross-section of the head reveals a combustion chamber of familiar General Motors pattern. The big bore allows room for larger valves and an internal gallery in the cooling passage directs water round the valve seats.

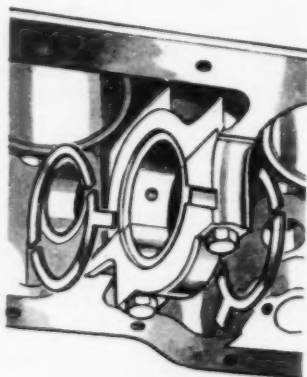
THE time lag between designing a new car for large-scale production and finally seeing it roll off the assembly line is now so great that modifications often have to be introduced to meet changing conditions before the first cars reach the public. The Korean war and a vast rearmament programme have disrupted the plans of many manufacturers, and there are several cases both in the United States and in Europe where it has been possible to commence production of a new model at the scheduled date only by adapting an existing power unit rather than waiting for the new one.

The Vauxhalls introduced last August constitute one example. When the new models were designed, with their much larger accommodation for passengers and

luggage, their new front suspension and entirely different external appearance, it was also hoped to take advantage of the abolition of the horse-power basis of taxation by fitting new power units with a more logical ratio of bore to stroke. A vast new factory was ready to start making the new cars by the early summer of last year, but progress with the complex arrangements for making the new engines had not kept pace, and production was possible only by adapting the existing power units, which had given very good service in the previous range of cars.



Installed performance curves for the new Wyvern engine in solid lines contrast with those of the old power unit, shown dotted. Power and fuel consumption are improved throughout.



Crankshaft end thrust in the new engine is taken by half-thrust washers with white-metal faces on the centre main bearings. Here is the arrangement in the Wyvern.

However, the new engines are now ready and are already being fitted in Vauxhall cars leaving the Luton works.

In size and general design they do not differ very greatly from the previous power units, but the use of a larger bore and shorter stroke, added to numerous detail refinements, has produced engines which give more power and a higher torque, with a lower consumption of fuel. They should also have a longer life between overhauls. A subsidiary advantage, from the service angle, is that there are now many more parts common to both the four- and the six-cylinder engines; a smaller stock of spares will, therefore, suffice to provide complete service for both.

The new Vauxhall engines are actually

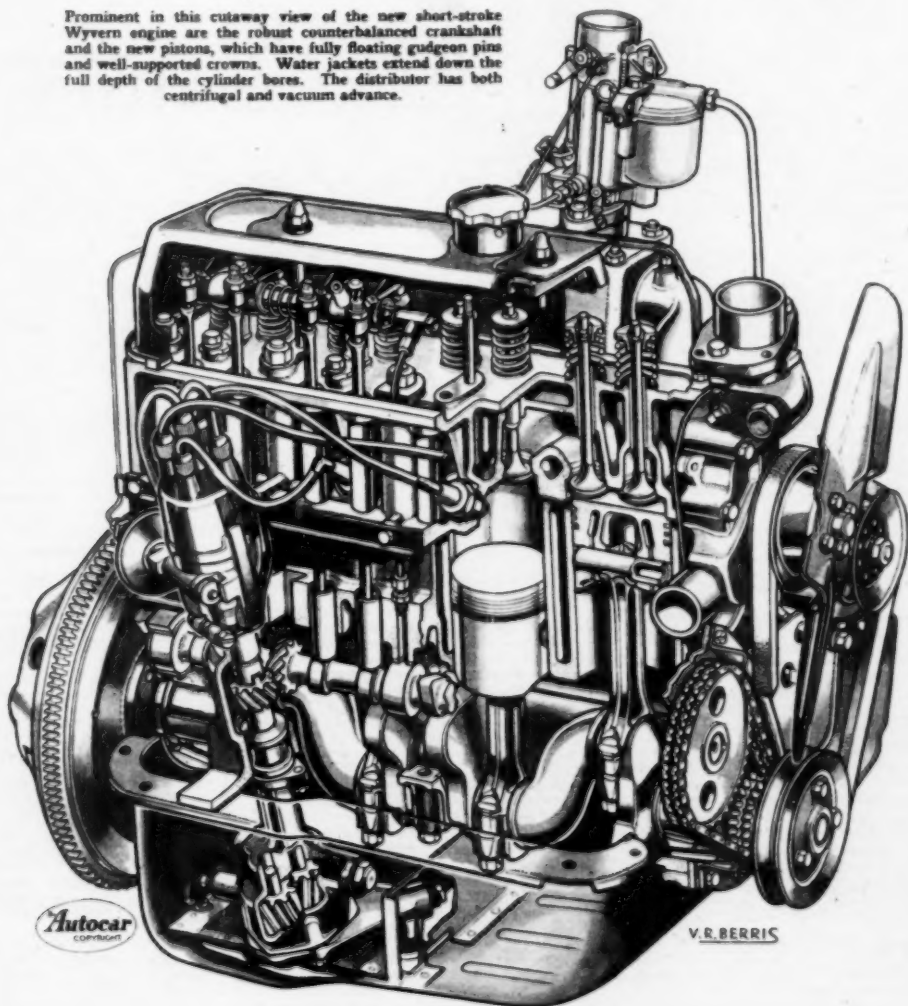
over-square, in that the bore is greater than the stroke. The use of the same bore and stroke for both engines allows the same pistons and connecting rods for both, and has led to an increase in the swept volume of the Wyvern, while that of the Velox has been slightly reduced. To be exact, the Wyvern cubic capacity is increased by 65 c.c., or 4 cu in, while the Velox is reduced by 5 c.c. or 0.8 cu in, but both engines show considerable improvements in performance over their predecessors. Whereas the previous Wyvern reached its peak at 35.5 b.h.p. at 3,200 r.p.m., the new square engine develops more power throughout the range and the curve rises steadily to a peak of 40 b.h.p. at 4,000 r.p.m. The torque curve is much improved and this

should be reflected in considerably better acceleration. The peak torque is higher than on the old engine, and more than 60 lb ft is now available all the way from 600 to 3,400 r.p.m.

With the Velox six-cylinder engine there is an improvement in power output over the whole range and the peak figure is now 64 b.h.p. at 4,000 r.p.m., whereas the limit of the previous engine was 58.3 at 3,600 r.p.m. Once again, the torque is higher than before, and is available over a much greater range of engine speed.

These power and torque figures are the maximum readings obtained on the test bed with the engines unencumbered by silencers or accessories. The power available, as installed in the car, with an

Prominent in this cutaway view of the new short-stroke Wyvern engine are the robust counterbalanced crankshaft and the new pistons, which have fully floating gudgeon pins and well-supported crowns. Water jackets extend down the full depth of the cylinder bores. The distributor has both centrifugal and vacuum advance.



Autocar
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V.R. BERRIC

New Engines for Vauxhall

continued



The Wyvern has a sloping inlet manifold and the Zenith 30 VIG-7 carburettor has a larger air cleaner and silencer than is used on the Velox. Also visible is the balance weight for the thermostatically controlled hot-spot on the inlet manifold.

engine fitted with the standard air cleaner and exhaust system and driving the fan, water pump and dynamo, is naturally somewhat less. It is these installed figures for power and torque which form the basis of the comparative performance curves on these pages. They form the true indication of the power available to drive the car.

Gear ratios, axle ratio and tyre sizes are unchanged, and engine revs per mile are therefore the same as before, but the new cars should have much improved flexibility and hill-climbing capacity.

Apart from the change in basic proportions, the breathing capacity of both engines has been improved by the use of larger valves, larger ports and improved manifolds. Extensive research into camshaft timing and cam profiles has also contributed to a higher volumetric efficiency. Fuel consumption has been reduced simultaneously, and it is now claimed that the Wyvern will achieve 35 m.p.g. when driven in a normal manner at an average speed of 30 m.p.h. while the Velox should show 28-29 m.p.g. in conditions where the same car with the previous engine recorded 25 m.p.g.

Piston Speeds

Numerous features should contribute to longer life. First of all, the shorter piston travel is in itself a considerable factor in reducing cylinder wear, as these tabulations show:

Piston travel in feet per road mile		
	Old engine	New engine
Wyvern four-cylinder	2.335	1.875
Velox six-cylinder	3.145	1.681

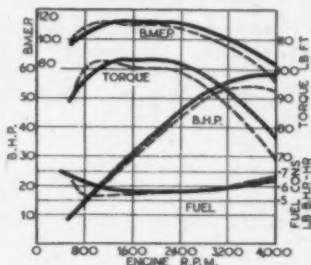
Much higher cruising speeds can now be maintained for the same mean piston speed.

Road speeds at same piston speed		
	Old engine	New engine
Wyvern four-cylinder	50 m.p.h.	60 m.p.h.
Velox six-cylinder	55 m.p.h.	71 m.p.h.

A further contribution to longer bore life has been made by a new cylinder boring technique. The first rough cut brings the bore to within a few thousandths of an inch of the correct diameter, after which a light, precisely controlled cut is made with a single-point tool. The bore is finished by honing lightly with very fine honing stones. The single-point tool produces minute but clearly defined ridges in the surface. The tips of these ridges are removed by the honing operation, but sufficient tiny hollows remain to

retain oil on the surface and assist lubrication during the all-important running-in period. There is also less tendency for the oil to drain completely from the cylinder walls when the engine is left standing, and so the possibility of surface damage resulting from excessive dryness when starting from cold during the running-in period is reduced.

This method marks a departure from the highly polished mirror-finished bore which has received much notice in recent years. It was first used by Vauxhall on



Comparative curves for the new and old (shown dotted) Velox engines show important increases in torque and horse-power, with a useful improvement in specific consumption at low speeds. These curves are based on the installed power, with silencers and auxiliaries, as fitted in the car.

the new range of Bedford trucks, and service records are said to indicate greatly increased bore life.

Another advantage of the over-square layout is, of course, a stronger and more rigid crankshaft, because of the appreciable overlap between the main and big-end bearing journals. Life of the small-end bearing has been extended by using fully floating hollow gudgeon pins in bronze-bushed connecting rods, instead of the fixed pins which were clamped in the connecting rods by pinch bolts on the previous series of engines. Crankshaft end-thrust is now taken by steel half-thrust washers with white-metal facings instead of by flanges on the intermediate

bearings. Thrust is taken on the centre main bearing of the Wyvern and on the two middle bearings of the Velox.

Owing to the larger bore of the new engines it is no longer necessary to split the big-end bearing at an angle in order to permit the piston and rod to be withdrawn upwards. Big-end bearing caps are now secured by through bolts and nuts instead of by set bolts.

The combustion chamber in both the new engines resembles that used in the previous long-stroke Velox. There is a compact offset space where combustion is initiated, after which it spreads to a thin, flat area over the piston. The difference is that the new engines have flat-topped pistons whereas the old Velox had a slightly sloping piston crown. The former Wyvern had a rather differently shaped combustion chamber with an offset hump on the piston, which is now abandoned.

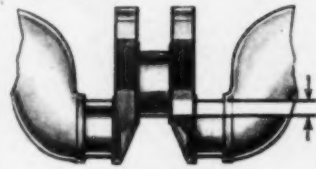
By-pass oil filters with quickly replaceable elements are bolted direct to the crankcase to eliminate external piping. Control of oil supplied to the valve gear includes oil sealing washers beneath the valve spring caps on the inlet valve stems.

A centrifugal pump at the front of the cylinder block directs water through an internal gallery to exhaust valve seats and sparking plug bosses. There are passages connecting the cylinder head waterways with the full-length cylinder jackets. Thermostats provide control of water circulation. The cooling system of the Wyvern works at atmospheric pressure, but that of the Velox is pressurized to operate at between 3½ and 4½ lb per sq in above atmospheric pressure.

ENGINE SPECIFICATIONS

Wyvern E1X—4 cyl, 79.37 x 76.20 mm, 1,507 c.c., a.h.v. push rods. Compression ratio 6.4 to 1. Counterbalanced forged crankshaft in three main bearings. 40 b.h.p. at 4,000 r.p.m. Maximum torque 71 lb ft at 2,000 r.p.m.

Velox E1P—6 cyl, 79.37 x 76.20 mm, 2,262 c.c., a.h.v. push rods. Compression ratio 6.4 to 1. Counterbalanced forged crankshaft in four main bearings. 64 b.h.p. at 4,000 r.p.m. Maximum torque 108 lb ft at 1,200 r.p.m.

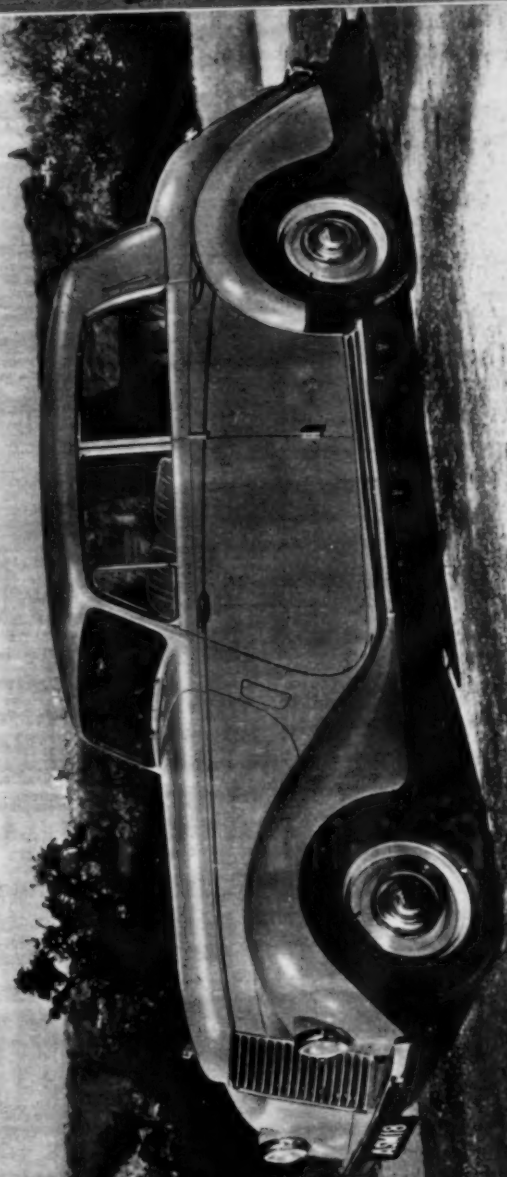


The use of a short stroke and large bore allows room for bearings of adequate size and permits a good overlap between main and big-end journals, producing a stiffer crankshaft.

THE AUTOCAR, APRIL 25, 1932

W H I T L E Y . C a r s o f H U R R I C A N E

The Whitley



W H I T L E Y . C a r s o f H U R R I C A N E

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Outstanding Performances!

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GOOD  YEAR



At Cairn O' Mount : G. Gibson, Jr., starts in the second test. Behind are P. Hughes (Allard), J. C. Wain and R. O. Hardman (Austin).

Highland Three-day Rally

SUN SHINES ON SUCCESSFUL SCOTTISH EVENT

THE Highland Three Days Rally, organized by the Scottish Sporting Car Club, has now firmly established itself among the annual Easter classics, and this year's event was the best so far. The route totalled almost five hundred miles of wonderful scenery, and the interest was well sustained from start to finish. Certainly, those English enthusiasts who are anxious to make a start in the rally type of event could do a lot worse than see something of Scotland in these enjoyable circumstances, and it is to be hoped that in next year's Highland Three Days the entry from south of the border will be still larger than it was on this occasion.

"Not a tremendously arduous event, but one in which competition was keen and which good sportmanship made highly enjoyable," was the verdict of the competitors in the rally. The eleven entrants from England—who made up one-fifth of the entry—were much impressed by the interesting route and, as each day brought more sunshine than the one before, they saw Scotland at its best.

Although not remarkably arduous, marks had to be fought for and, in the class for large open cars two Scots, G. P. Denham-Cookes (Jaguar) and K. D. Fraser (Healey) kept battling with each

other for the George Hendry trophy while, although making the best time of the day in three of the tests, Bob Dickson (Morgan) produced very ordinary times in the other two and was unlucky enough to make a bad guess in a road section which prevented his taking the trophy south.

In the class for closed cars over 1,500 c.c.

the consistent performances of John Melvin (Sunbeam-Talbot) always had the edge on those of L. S. Cordingley (Fraser-Nash) of Haslingdean, while only 0.2 sec separated F. D. Dundas (Javelin) and K. R. Sturrock (Ford) in the class for closed cars. One award did go south, however; this was in the open car class under 1,500 c.c. where a keen young enthusiast, T. Blackburn (Lund Special), beat his Scottish counterpart J. D. Milne in an M.G. Midget.



The first test, at Logie, with N. T. Lithgow skidding his H.R.G. into a hairpin.



J. D. Milne (M.G.) and J. Parr (Allard) pass P. K. C. Gordon's Standard.

HIGHLAND THREE-DAY RALLY continued

Incidents in Saturday's road sections, which contained such place names as Kincardine, Crieff, Kirriemuir and Braemar, were remarkably few. Young R. G. Mickel in a Morris Eight was unlucky to collect a penalty mark as a result of mistaking a group of cars for a control. The only competitor to go far astray was R. O. Hardman (Austin), who had seventeen marks added to his score.

The forward and reverse test on the steep hairpin of Logie Hill was really well done by J. D. Scott (M.G.) and the shattering enthusiasm of D. Horne (Torrance Spl) took him over line C be-

fore he had reversed over B and cost him a sheared brake pin. The speed and stop climb on a stiff section of Cairn O' Mount was the scene of a sparkling performance by Bob Dickson (Morgan) in 15.6 seconds. With the average 23 sec and a Healey of 2,443 c.c. taking 69.4 sec it can be gathered that Dickson was good.

On Sunday J. S. Landless was the only culprit on a section of the route that went from Gleneagles to St. Andrews and back via Yettis O' Muckhart, but this was understandable as he was having clutch trouble with his Bentley.

A test on Gask aerodrome was definitely

ambiguous in the instruction sheet and competitors' methods upset the calculation formula; so, with many apologies, the S.S.C.C. washed it out. The regularity test on the road from Yettis O' Muckhart to Dunning saw good performances by W. W. Fulton (Javelin), Miss A. I. C. Neil (Standard) and C. W. I. Jeffrey (H.R.G.), but Dickson was highly irregular to the tune of 7 marks. In a well-designed parking test the excellent lock of the M.G.s came in handy, as was exemplified by G. I. Gibson, Jr., and J. D. Milne. Owners of large cars did much pylon clanging.

Final Efforts

On the last day, the best time in a reversing half-circle test was made by Dickson (Morgan) and he shared the best time for an acceleration-and-sudden-stop test with W. D. R. Lamb (Healey). There was much rubber burning by Denham-Cookes (Jaguar), so anxious was he to beat Ken Fraser (Healey), and a grand performance by J. A. H. Broadbent in an Allard saloon. On this day the road sections resulted in many penalties, and too-enthusiastic motoring by N. Paterson and J. D. Milne in their M.G.s resulted in an encounter with a road bank which brought a cracked sump and a bent track rod respectively. That, however, did not keep Milne off the awards list.

RESULTS

George Hendry Trophy (best performance): Jaguar (G. P. Denham-Cookes), 79.4 marks lost.

Open Cars:

Up to 1,500 c.c.: 1. Lund Spl. (T. Blackburn), 89.2; 2. M.O. Midget (J. D. Milne), 95.5.

Over 1,500 c.c.: 1. Jaguar (G. P. Denham-Cookes), 79.4; 2. Healey (K. D. Fraser), 92.9.

Closed Cars:

Up to 1,500 c.c.: 1. Jowett Javelin (P. D. Dundas), 96.1; 2. Ford (R. R. Sturrock), 96.3.

Over 1,500 c.c.: 1. Sunbeam-Talbot (J. D. L. Melvin), 95.0; 2. Fraser-Nash (L. S. Cordingley), 100.8.



A Healey Silverstone (K. Fraser) at the Logie test.



*For the sheer joy of driving
I'd like to go there in an*

ALVIS



IN FRONT OF YOU, The Zugspitze

towers 9,700 feet into the sky. Behind you the fine new road winds down through the forests from the summit of the Fern Pass (3,965 ft.). It may not be so easy to get there this year. But it will be easier in an ALVIS than in any other car.

In the words of "The Autocar" Road Test February 15th, 1952.

"An experienced and critical driver will not fail to be impressed by the feel of the Car; its handling qualities at both high and low speeds are much above the average."

Photograph: CAPTAIN J. BETHAM, R.A.O.C.



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Service Viewpoint

Does Cleanliness Impress?

I SHOULD like to run a poll of motorists' opinions as to whether, on entering a service station, they are favourably impressed by an air of general cleanliness. I am lucky enough to work for a firm which devotes quite a lot of time and effort to keeping the walls and floor of the premises clean; our receptionists and petrol attendants change their white coats twice a week, the rest of the staff once a week; white lines, kerbs, and the plinths on which the petrol pumps are mounted are repainted as soon as they lose their freshness. All this costs money which is reflected in our overheads and must, in turn, be covered by our charges. What I would like to know is: Do our customers appreciate it?

Some motorists may think that cleanliness is an outward and visible sign of efficiency behind the scenes; others, while admiring spit-and-polish, may resent having to pay for it; yet others may prefer a dirty workshop on the grounds that the staff are too concerned about the technical excellence of their work to worry about appearances. I don't suppose I shall ever be able to find out the majority verdict on this question; but I am quite certain of my own. Cleanliness is worth every penny spent on it.

Overload

OWING to shortage of labour, at least in urban districts, most service stations are being offered more work than they can comfortably handle. This has been the position in London for some time past, and cars are therefore maintained on the same basis as teeth; if they require attention, an appointment must be made a week or two ahead. This does not apply to cars which have unexpectedly broken down any more than it does to teeth which suddenly start to ache beyond endurance; in both cases the necessary attention is regarded as an emergency and is fitted in between appointments.

Although motorists, in London at least, have accepted gracefully the fact that they need to plan ahead for routine maintenance and repairs, I do not think many of them realize how difficult it is to operate an advance booking system accurately. It is by no means uncommon for a customer to complain bitterly if work is not started on his car immediately it is brought in. "Dash it," he says, "you make me wait a fortnight before I am allowed to bring my car in, then you let it hang about for hours before you

even start work on it; is this fair?" Now this attitude is quite understandable but shows that our difficulties are not appreciated and I would like to offer an explanation.

Waiting

EVEN the dentist, who should be able to forecast pretty accurately how long he will take to deal with each job, is quite likely to keep a patient waiting for an hour or more; but most of us accept such delays philosophically. Consider, then, how much more difficult it is for a service station. In theory, we could work out a complicated man-hour capacity chart, showing the estimated man-hours required to complete the work in hand compared with the man-hours available; from this, we could work out exactly when surplus capacity would be available to deal with fresh intakes of work. In practice, however, this just isn't possible because we never know how long any job will take to complete. For example, a car comes in for brake adjustment—about an hour's work. We soon discover that the linings are worn out and have to be replaced, which requires, say, another six hours' work; but in the process of changing the brake shoes we find that the operating mechanism is falling to

pieces and requires overhaul—another six hours' work perhaps; finally we cannot get satisfactory braking because the springs have settled so far as to interfere with the geometry of the operating gear and we have to remove all the springs, set them up and refit them—time required, including burning-out seized shackle pins, ten hours. Thus the work estimated to take one hour has actually taken 23 hours.

Conversely, there is the customer who brings his car in for a long list of repairs involving about 24 hours' work and then decides at the last moment that he wants the car because he is going away for the weekend and that most of the repairs will have to be done "another time, old boy, when I'm not so busy." Apart from these difficulties we have to allow a margin for emergencies and sudden breakdowns, sickness of mechanics and other contingencies. So it is hardly surprising that our system isn't quite accurate.

Actually, we have proved that no mathematical system is practicable. We merely keep a large diary in the reception office in which the telephonist enters appointments as and when they are made. The chief receptionist looks at this diary frequently during each day; when his practised eye tells him that there are enough cars booked in for a particular day—having taken account, of course, of the sort of jobs they are coming in for—he rules off the page so that no more appointments are made for that day. This hit-and-miss system works surprisingly well; if anybody can tell me of a better one, which does not involve vast expenditure on equipment, I shall be glad to hear about it.

SERVICEMAN.

"Too concerned about the technical excellence of their work."





The Morris was the first car to cross the Cakor pass in 1951. The pass, 7,000ft high, links Serbia and Montenegro. Even at Pec, the nearest town, nobody knew whether the pass was yet open or if the surface had slid away during the winter.

by Patrick
Sergeant



RETURN TO THE PRIMITIVE

MOTURING IN YUGOSLAVIA STILL HAS THE APPEAL OF PIONEERING

DRIVING in Yugoslavia still has many pleasures which have long disappeared from touring elsewhere in Western Europe. There are the magnificent scenery and primitive, colourful people; ancient ways and old buildings; but there is also that sense of excitement, adventure and rarity that the old motoring pioneers must have enjoyed. One hundred miles from uncertain supplies of petrol and four hundred from spare parts, you bump, slowly, over a mixed mud and dirt road with the stones rattling against your petrol tank and tearing at your tyres. But the sensation of rarity, of being different, is the most strongly felt. The Morris Oxford, in which I made my journey of 2,500 miles through Yugoslavia, was often the first English car

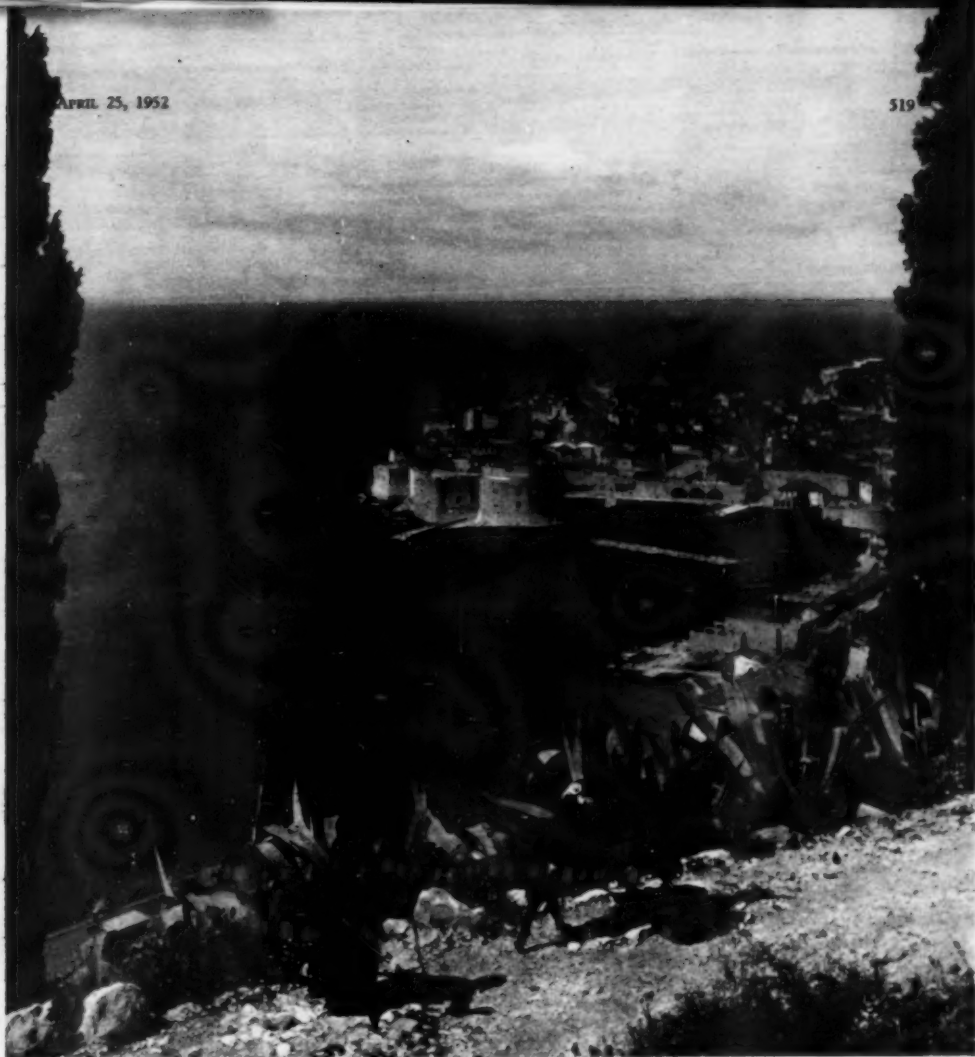
and, down in Old Serbia and Macedonia, sometimes the first car, that people had seen.

Many people have been surprised that I was allowed to drive round Yugoslavia without supervision. But very great economic and political changes have come about there recently. There is much more freedom, people are pleased to welcome you and the Government is trying to attract British and American tourists. A year before my tour would not have been permitted, but last year I went where I wanted to, talked to whom I liked and was stopped only once and that was a routine check-up close to the hostile Albanian border.

The State Tourist Bureau ("Putnik") is trying to attract

"Sometimes the first car that people had seen."





Dubrovnik is called the Pearl of the Adriatic.

your money this year. I recommend you to think about it. I have been to most of the countries of Western Europe since the war and have not enjoyed myself as much, or found them as cheap as Yugoslavia. There is a wonderful gaiety and sense of purpose about the country, and a fierce independence and fire about the people, which is stimulating; and, on the Dalmatian coast which is between the mountains and the Adriatic, there are warmth and beauty and sunshine and, moreover, south of Split, reasonable roads.

Most tourists will stay on the coast and enjoy the charms and cheapness of Dubrovnik, which is quickly regaining the comforts that made it the "Pearl of the Adriatic" in the days before the war. But the curious and adventurous can penetrate the mountains and see in and beyond there a primitive form of life and agriculture. Serbian monasteries and Turkish minarets; women working in veils as beasts of burden, cuffed on by their men; wooden ploughs; the shepherdesses tending their flocks and making their own peasant clothes. It is a country, 250 years behind Europe, whose last serious road-building programme was undertaken by the Romans, some of whose roads have been used, and apparently not repaired, since the third century A.D.

Once you cross the northern border from Graz or Trieste,

cars become very scarce. The roads immediately deteriorate, signposts disappear and the potholes increase in size and multiply. Yugoslav roads conform to no classification; a "main thoroughfare" covers everything from the Autoput Brotherhood of Youth to the cart tracks sprinkled with stones and large nails.

The Autoput, incidentally, must be one of the most unusual roads in Europe. It was built, between 1946 and 1949, by what is claimed was voluntary labour, to join Zagreb and Belgrade—the capitals of the two ancient enemies, Croatia and Serbia. This is how the R.A.C. route to Belgrade describes it:—

"The Autoput Brotherhood of Youth is open between Zagreb and Belgrade. The surface is of concrete with a few cobbled patches and the width is 30 feet. The road is almost dead level and deviates only 5 per cent from a straight line

"Hoppy," one of the famous good-looking traffic policemen in Belgrade. Each time they see a car, they perform a graceful ballet dance in reply to the horn.





The road into Dubrovnik. During the whole trip in Yugoslavia not one puncture was experienced.



The end of the road. "You can always swim." Note the fresh water supply coming across from the spring on the mountain; the original bridge was blown by the partisans and has not yet been replaced. Road building ranks high in precedence in the Yugoslav economy.



The road from the top of the mountains between Cetinje and Titograd, which has 36 turns between peak and valley but which is astonishingly well graded.



After a frost-bound night on the Macedonian mountainside, the car started at once but the clothes took much longer to get over the contrast between sun and frost.

RETURN TO THE PRIMITIVE: continued

between the two cities. There are no repair shops or garages en route, and the motorist must carry all necessary spares, among which inner tubes are essential, owing to nails dropped from horses and carts. One must also beware of cattle that stray on to the road. The only garage capable of doing repairs is the British Embassy's own workshop at Belgrade."

The road is 264 miles long and, besides having no garage, has neither café nor restaurant. It took us six hours to drive along it one weekday in May and, during that time, we neither passed nor were passed by anyone, and met only three trucks and one American diplomatic car.

This is the "Great North Road" of Yugoslavia; so you can imagine the conditions down south in Serbia, Montenegro and Macedonia. Here, as on the Autoput, the hazards are not other vehicles—I once went two days without seeing one—but the animals which rear and run at your approach and the sudden disappearance of the road into several tracks.

But the most disconcerting factor in one's first days on the Yugoslav roads is the blank, steady, wondering stares which greet you everywhere. Cars are so rare that the sound of an engine scares the animals into a panic. Even in the towns, the policemen have time to do a graceful pirouette and a swirl of the arms to indicate to each driver

which way he may go. In the country villages, an instant's halt brings out every man in the neighbourhood—the women are cuffed back to work—who examines the car and questions you eagerly about it. You will be invited in to the "local" and there expected to be able to answer diverse questions about life in Britain. The women will be left in the car in the tacit assumption in these parts that they are there only to carry the bags, anyway!

Yugoslavia must be one of the few countries in Europe where British cars are preferred to American. Our tougher springing, quick manoeuvrability and narrower wheelbases make the British cars much more suitable to the roads and mountains than the Americans. In Belgrade, American owners—there are very few British cars in the country, only one other Morris and that is a Minor belonging to an American correspondent—tell you that the journey south and over the Western mountains is impossible and that four punctures a day are the best you can hope for. I drove the whole way, admittedly sometimes making only ten miles an hour, without any trouble and without my British Dunlop heavy-duty tyres once requiring air, let alone mending. It is only fair to say that the locals considered me extremely lucky or a liar. But the two American correspondents who were with me are taking British cars and tyres for their next trip. . . .



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*Fashion sketch from the
1951 Summer Collection
of Victor Stiebel at
Jacquar, London, W.1*

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For really high performance, with surprising economy. (Over 25 m.p.g. with normal driving).

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Same size, same modern styling as Velox; and outstanding economy. (35 m.p.g. with normal driving).

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ELDOM in motoring history has one make of car so completely dominated the international scene as has Jaguar in recent years. In major motoring events the famous XK 120 Sports has an unparalleled record of success, the Le Mans 24-hour race, the R.A.C. Rally, Alpine Trial and the R.A.C. Tourist Trophy all having fallen to its remarkable performance. Likewise throughout the markets of the world the Mark VII Saloon, powered by the XK 120 engine, has received universal acclaim for its inimitable combination of Grace — Space — and Pace.



The XK 120 Fixed Head Coupe

With every attribute of the open two-seater, and with identical specification and performance, this beautifully proportioned coupe provides all the advantages of luxurious saloon car comfort.

The XK 120 Open Sports

Although it has attained remarkable success in sporting events, the XK 120 is nevertheless essentially a touring car, capable of easy handling in town traffic as well as on the open road.



THE FINEST CAR OF ITS CLASS IN THE WORLD



The Mark VII Saloon

JAGUAR *Grace.. Space.. Pace...*



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Performance and
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Saloon of unusual
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BRITISH CARS *for the World*

VARIETY, INDIVIDUALITY AND ECONOMY ARE FOUND IN THE PRODUCTS OF
BRITAIN'S AUTOMOBILE INDUSTRY

POST-WAR ideals of economic planning having proved sadly disappointing, Britain's motor industry has been permitted to abandon the starry-eyed (but impracticable) perfection of standardization down to one or two models and has been left, instead, to make the most of the diversity for which these islands are famous, and which is reflected in the products of their people. The result is currently a range of cars to suit everyone from the millionaire to the "marginal motorist" of the economists—that unfortunate owner who can only just afford to possess a car. That is price diversity. But within the price range are other diversities, of style, performance, appearance and size; in every respect of motoring, in fact.

It is to be hoped that the broadness of outlook implied by this is appreciated, for the car manufacturers of Britain have made great efforts in recent years to cater for the world at large; the home market in Britain has been under rigid Government restriction, manufacturers having been practically compelled to export about three-quarters of their output. Numerically, they would willingly export more, but the output figures as a whole are held down by raw material shortages, notably of steel, although steel supplies are expected to increase again. The rearmament programmes of the Western Powers make large demands, however, upon manufacturing capacity, and much of that capacity is necessarily found within the factories of the motor industry. These difficulties may explain the waiting period that is sometimes experienced between the placing of the order and the delivery of a car, although shipping shortages and slow turn-rounds in port also contribute to this.

There are few territories in the world nowadays that are unsuitable for motoring, and certainly amongst those where the car is regularly used there is none that is unsuitable for British cars. The unthinking criticism is frequently made that British cars are "under-powered," but this is an individual criticism that reflects more on the

knowledge of the critic than on the product criticized. The largest engine size available from Britain is no less than 5½ litres, and the range goes down in steps to the smallest at 800 c.c. Where David stands alongside Goliath, it is difficult to make the shout of "too small," or "too big" sound convincing. None the less, it is freely acknowledged that the *average* engine size from Britain is rather smaller than is offered by America, but this is quite intentional in a world where petrol is becoming more and more expensive (it is now about 6s a gallon in many European countries) and where there is a growing appreciation of the fact that waste of the world's resources is rushing the human race into jeopardy. In fact, the critic who is over-impressed by the ease with which the large-engined car performs is probably merely a casual driver whose hand does not have to dive into the pocket to find the wherewithal on which all those litres of engine size perform.

Good value for money is the criterion of Britain in business, and the overseas buyer who knows what he wants and takes care in its selection will not be disappointed in his car from Britain. Whatever the desire in the mind of the purchaser, whatever the aim of the manufacturer in his efforts to satisfy the diversity that is normally expected from this quarter, there will be found quality in the finished result, the quality for which British goods have been famous for centuries. It is perhaps significant that the term "kerb-side finish" is one that is unknown in Britain, where manufacturers are accustomed to close scrutiny through a magnifying glass rather than admiration from a distance.

The British car will bear scrutiny whether it is directed under the bonnet, around the independent front suspension, or at the trim of the upholstery, for the British car manufacturer knows his own mind in these matters, knows that his insistence on value for money is shared by his countrymen who buy his products, and therefore assumes that a similar outlook applies wherever his cars are owned.

having always had a considerable reputation in this direction, as well as an appearance of rakishness that somehow suggested it. The modern saloon, however, has become less rakish than some of its ancestors (the Speed Twenty-five, for instance), although the performance is certainly not lacking. It is a beautiful body in the best English coachbuilding style and, in spite of the considerable weight entailed in the quality of the appointments, it is capable of travelling for hour after hour at a very high speed, in virtual silence, and of being accelerated to that speed in a remarkably short time; a sports tourer offers even more rapid progress and there is a special-interest convertible body style for those who want the best of both worlds.

Alvis is one of the older names in British automobile engineering, having started manufacture just after the first world war. They have always been associated with products of quality, and it is a considerable tribute to them that their between-wars models are much sought after by sporting enthusiasts, as readers of *The Autocar* "Talking of Sports Cars" series are well aware.

3-Litre: 6 cyl., 84 x 90 mm (3.31 x 3.54 in). 2,993 c.c. (242.57 cu in); o.h.v.; compression ratio, 7 to 1; 93 b.h.p. at 4,000 r.p.m. 4 speeds, synchromesh (overall ratios, 4.09, 5.44, 7.89 and 12.15 to 1); central control.

Suspension, independent front, coil springs; elliptic rear. Brakes, Lockheed hydraulic, two-leading shoe.

Wheelbase, 9ft 3½ in (283 cm); widest track, 4ft 6½ in (138.75 cm). Overall length, 15ft 2½ in (463.55 cm). Width, 5ft 6 in (167.64 cm). Height, 5ft 2½ in (158.8 cm). Ground clearance, 7½ in (19 cm). Turning circle, 30ft (1.189 cm). Weight (approx.), saloon, 3,248 lb (1,475 kg); tourer, 2,912 lb (1,347 kg).

Tank capacity, 14½ Imperial gallons (65.91 litres). Tyre size, 6.00-15 in. Battery, 12-volt, 64 amp-hour.

Saloon, 4-light	£1,250
Tickford D.H. Coupé	£1,250
Sports tourer	£1,250

ROAD TEST SUMMARY

Running weight, 3,538 lb (1,608 kg). 50.8 b.h.p. per ton laden. Maximum torque, 150 lb ft at 2,000 r.p.m.; 18.93 m.p.h. per 1,000 r.p.m. (top gear). Approx. m.p.s. 17-22 (16.6-12.8 litres per 100 km).

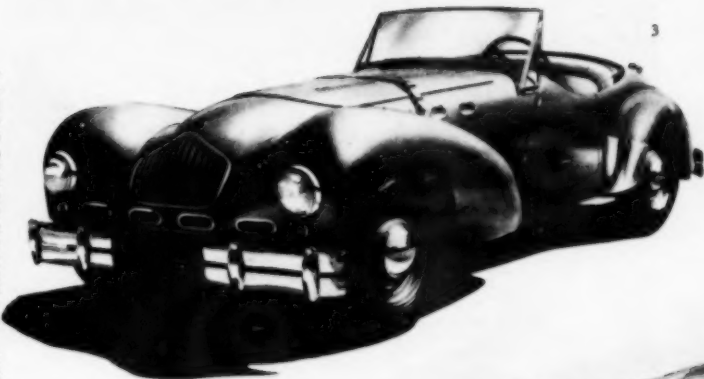
Best acceleration, 10-30 m.p.h., 4.5 sec; 30-50 m.p.h., 8.2 sec; 50-70 m.p.h., 15.6 sec. Through gears, 0-30 m.p.h., 5.3 sec; 0-50 m.p.h., 14.1 sec; 0-60 m.p.h., 19.8 sec; 70 m.p.h., 28.0 sec. Maximum speed, 86 m.p.h. (Road Test, February 15, 1952).

Armstrong Siddeley

Armstrong Siddeley Motors, Ltd., Parkside, Coventry.

CARS bearing the name of this old-established company (1902) are designed for the discriminating driver who

Armstrong Siddeley Whitley six-light saloon.



Allard K2 sports two-seater. Inset: The winning Allard in the 1952 Monte Carlo Rally.

values refinement, silence and good workmanship, with great ease of control, ahead of sensational figures on the stop watch. Four elegant body styles are available on a conventional chassis powered by an engine of 2.3 litres and six cylinders, and the transmission has the unusual feature of epicyclic gear box with preselector control (normal gear change is available on all models except the limousine, if required). The front suspension is independent, with a torsion bar as the springing medium, and the appearance of the car is in keeping with the dignity associated with the name; indeed, it contributes to it, and it is not irrelevant, when remembering that name, to recall that this company makes one of the most powerful aircraft engines in the world—the Sapphire.

The firm was originally known as the Siddeley Autocar Company, assuming its present title in 1919. Besides its introduction of the Wilson epicyclic gear box with preselector, which took place in 1928, the company pioneered the use of light alloys in car construction.

2.3 Litre: 6 cyl., 70 x 100 mm (2.756 x 3.937 in), 2,309 c.c. (140.91 cu in); o.h.v.; compression ratio, 6.5 to 1; 75 b.h.p. at 4,200 r.p.m. 4 speeds, synchromesh (overall ratios, 5.10, 7.24, 10.89 and 17.61 to 1); preselector (overall ratios, 5.10, 7.22, 10.66 and 18.36 to 1); optional central or steering column control.

Suspension, independent front, torsion bar; elliptic rear. Brakes, Girling hydro-mechanical. Wheelbase, 9ft 7 in (292 cm); widest track, 4ft



6½ in (138.4 cm). Overall length, Whitley, 15ft 3½ in (470 cm); Hurricane, 15ft 6½ in (472.4 cm). Width, 5ft 8 in (173 cm). Height, Whitley, 5ft 3½ in (160 cm); Hurricane, 5ft 1½ in (155 cm). Ground clearance, 7½ in (19 cm). Turning circle, 37ft (1.128 cm). Weight (approx.), Whitley (4-light), 3,150 lb (1,429 kg); Whitley (6-light), 3,360 lb (1,527 kg); Hurricane, 3,115 lb (1,413 kg).

Tank capacity, 12 Imperial gallons (54.5 litres). Tyre size, 5.50-17 in. Battery, 12-volt, 51 amp-hour.

Whitley 4-light saloon	£1,110
Whitley 6-light saloon	£1,110
Hurricane D.H. coupe	£1,110





BRITISH CARS FOR THE WORLD

Aston Martin

Aston Martin, Ltd., Hanworth Park Works, Feltham, Middlesex.

CHANGE of ownership has often meant change of character in the product where cars are the product in question, but the incorporation of Aston Martin in the David Brown Group (tractors and gears, as well as cars) in 1947 led only to an intensification of the already outstanding characteristics of this sports machine.

Aston Martin had always been a name that signified the British sports car at its best, and long lists of successes in sporting events confirmed the reputation. The car produced under the current control is the logically up-to-date version of its ancestors and has emphasized the fact by its tie for first place in the Le Mans annual handicap cup, a section of the 24-hour event which takes place yearly in France and which is the most gruelling sports car event in the calendar.

In this same race it has demonstrated its striking reliability as well as its splendid performance, and enthusiasts await with interest the exploits this year of the D.B.3 open two-seater.

D.B.3: 6 cyl., 78 x 90 mm (3.07 x 3.54 in.), 2,580 c.c. (157.5 cu in.); twin o.h.c.; compression ratio, 6.5 to 1 (optional, 8.16 to 1); 107 b.h.p. at 5,000 r.p.m. (optional engine, 123 b.h.p. at 5,000 r.p.m.); 4 speeds, synchromesh (overall ratios, 3.77, 5.01, 7.46 and 11 to 1; 3, 77, 4.75, 7.05 and 11 to 1; six other ratios available); central control (optional steering column control).

Suspension, independent front, coil springs, coil rear. Brakes, Girling two-leading shoe. Wheelbase, 8ft 3in (251.46 cm); widest track, 4ft 6in (137.16 cm). Overall length, 13ft 6in (412.75 cm). Width, 5ft 5in (165 cm). Height, 4ft 5in (136 cm). Ground clearance, 9in (21.59 cm). Turning circle, 35ft (1,067 cm). Weight (approx.), 2,500 lb (1,134 kg). Tank capacity, 19 Imperial gallons (86.37 litres). Tyre size, 6.00-16in. Battery, 12-volt, 63 amp-hour.

Saloon £1,750
Drop-head coupé £1,850
(Vantage engine, 8.16 ratio, £100 extra).

ROAD TEST SUMMARY

Running weight, 2,662 lb (1,210 kg). 88.35 b.h.p. per ton. Maximum torque, 125 lb ft at 3,100 r.p.m.; 21 m.p.h. per 1,000 r.p.m. (top gear). Approx. m.p.g., 17-20 (16.6-14.1 litres per 100 km).

Best acceleration, 10-30 m.p.h., 3.9 sec; 30-50 m.p.h., 11.3 sec. Through gears, 0-50 m.p.h., 5.1 sec; 0-50 m.p.h., 9.9 sec; 0-60 m.p.h., 12.4 sec; 0-70 m.p.h., 17.1 sec. Maximum speed, 110 m.p.h. (Road Test, November 17, 1950).

Austin

Austin Motor Co., Ltd., Longbridge, Birmingham.

UNDER the vigorous chairmanship of Mr. L. P. Lord, the Austin company has become a company of superlatives; it is Britain's biggest manufacturer, and

biggest exporter, with all that follows from that. It is also one of the two giants which make up the British Motor Corporation, the other being Morris Motors.

The Austin range caters for everyone by starting at the A30—the modern edition of the famous Seven—and extending through to the A.135 limousine, which is a large and luxurious car of high performance, obtained from a 4-litre six-cylinder engine. Included in the range are two quite unusual models, the A.40 Sports, a cleanly styled open car which made a name for itself by circling the globe, and the A.90 Atlantic, a strikingly styled convertible with power operation for the folding head.

It is difficult to characterize a company of this nature, because its activities are so all-embracing, but the Austin position in car manufacture is that of the "big store" in everyday life, offering much that the specialist offers but under one roof, and at prices that remain as low as enormous production makes possible. A company of this size has, of course, unrivalled service facilities all over the world, as well as assembly plants in many overseas countries.

Austin A.70 Hereford saloon.
Inset: An A.40 Sports in the Haute Savoie, France.





2-litre Bristol Type 401 saloon.

BRITISH CARS FOR THE WORLD

Bristol

Bristol Aeroplane Co., Ltd., Car Division, Filton, Bristol.

IDEALISM has entered greatly into the production of this medium-powered, high-performance quality machine. Within reasonable limits, first cost has not been allowed to hamper design and construction methods, and the result is a very beautiful car indeed, not only in appearance but also in the pleasure that it gives the driver.

In the event, production of the Bristol has proved to be a practical experiment in extracting the utmost benefit in every direction from the 2-litre engine. Two litres is not a size that results in an excess of power, but the final result suggests for most of the time that something like three litres are under the bonnet. Maximum speed is very high, assisted by a truly aerodynamic body shape, and acceleration is vivid provided that the driver will make proper use of the delightful gear change, which means going up to speeds on the indirect gears that are normally undreamed of. Conversely, the use of bottom gear at low speeds is encouraged by the provision of a free wheel on this gear alone, enabling clutchless changes to be made into this ratio—a considerable convenience in traffic driving.

The interior of the car is superlatively and tastefully done, quality woodwork and leather being predominant. The driver is studied to the point of pampering, by the

provision of many of the fittings omitted from current cars. None the less, the absence of frivolity in such matters is emphasized by an instrument panel that is an array of first-class instruments, each giving necessary information to a driver of intelligence. Perhaps this aspect of the car is the one that most betrays the aircraft connections of the makers. Thoroughly practical, especially for a car used remotely from service facilities, is the fitting of a one-shot chassis lubrication system.

Type 401: 6 cyl., 66 x 96 mm (2.598 x 3.779 in), 1,971 c.c. (120.284 cu in); o.h.v.; compression ratio, 7.5 to 1; 85 b.h.p. at 4,500 r.p.m. 4 speeds, synchromesh (overall ratios 3.9, 3.05, 7.12 and 14 to 1); central control.

Suspension, independent front, transverse spring; torsion bar rear. Brakes, Lockheed hydraulic, two-leading shoe.

Wheelbase, 9ft 6in (289.56 cm); widest track, 4ft 6in (137.16 cm). Overall length, 15ft 11in (486.4 cm). Width, 5ft 7in (170.18 cm). Height, 5ft (152.4 cm). Ground clearance, 6in (15.2 cm). Turning circle, 37ft (11.43 cm). Weight (approx.), 2,700 lb (1,225 kg).

Fuel capacity, 17 Imperial gallons (77.24 litres). Tyre size, 5.75-16in. Battery, 12-volt, 51 amp-hour.

Saloon £2,270

ROAD TEST SUMMARY

Running weight, 2,786 lb (1,266 kg). 59.5 b.h.p. per ton laden. Maximum torque, 106.8 lb ft at 3,500 r.p.m.; 19.83 m.p.h. per 1,000 r.p.m. (top gear). Approx. m.p.g., 20-24 (14.1-11.8 litres per 100 km).

Best acceleration, 10-30 m.p.h., 7.3 sec; 30-50 m.p.h., 6.9 sec; 50-70 m.p.h., 11.9 sec. Through gears, 0-30 m.p.h., 5.0 sec; 0-50 m.p.h., 11.7 sec; 0-60 m.p.h., 17.4 sec; 0-70 m.p.h., 23.2 sec. Maximum speed, 93.75 m.p.h. (Road Test, March 7, 1952).

Citroën

Citroën Cars, Ltd., Trading Estate, Slough, Buckinghamshire.

ASSEMBLY of the French Citroën car began in Britain in 1926, and over the years much purely British ancillary equipment has been standardized on the product. Currently this comprises two models—the Light Fifteen and the Six—both of which follow their French counterparts in fundamental design; they have front-wheel drive, independent front suspension by torsion bars, unit construction of body and chassis, and rack and pinion steering.

The Citroën is an unusual car even amongst the diversity of British products; its front-wheel drive would ensure that, in any case. But it is unusual in other respects, for it pays no lip-service to current styling trends and is in all performance respects a completely honest vehicle. It commands a wide respect in Britain, where a good product, no matter from what country, can be assured of a welcome.

Light Fifteen: 4 cyl., 78 x 100 mm (3.07 x 3.937 in), 1,911 c.c. (115.67 cu in); o.h.v.; compression ratio, 6.5 to 1; 56 b.h.p. at 4,250 r.p.m. 3 speeds, synchromesh (overall ratios, 4.3, 7.3 and 13.1 to 1); facia board control.

Suspension, independent front, torsion bar; torsion bar rear. Brakes, Lockheed hydraulic.

Wheelbase, 9ft 6in (291 cm); widest track, 4ft 6in (135 cm). Overall length, 14ft 5in (439 cm). Width, 5ft 5in (167 cm). Height, 5ft (152 cm). Ground clearance, 7in (18 cm). Turning circle, 43ft (13.10 cm). Weight (approx.), 2,352 (1,070 kg).





3-litre Daimler Regency saloon.

Tank capacity, 10 Imperial gallons (45.46 litres). Tyre size, 165-400. Battery, 12-volt, 57 amp-hour.

Saloon £665
Six-cylinder 6 cyl, 78 x 100 mm (3.07 x 3.937 in), 2,860 c.c. (174.9 cu in); o.h.v.; compression ratio, 6.5 to 1; 76 b.h.p. at 3,600 r.p.m. 3 speeds, synchromesh (overall ratios, 3.87, 5.62 and 13.25 to 1); facia board control.

Suspension, independent front, torsion bar; torsion bar rear. Brakes, Lockheed hydraulic. Wheelbase, 10ft 1 1/2 in (309 cm); widest track, 4ft 10 1/2 in (148 cm). Overall length, 15ft 9 in (480 cm). Width, 5ft 10 in (176 cm). Height, 5ft 11 in (154 cm). Ground clearance, 7 in (18 cm). Turning circle, 45ft (1,366 cm). Weight (approx.), 2,912 lb (1,324 kg).

Tank capacity, 15 Imperial gallons (68.18 litres). Tyre size, 185-400. Battery, 12-volt, 57 amp-hour.

Saloon £980

ROAD TEST SUMMARY

Light Fifteen: Running weight, 2,464 lb (1,120 kg). 43.3 b.h.p. per ton. Maximum torque, 90.4 lb ft at 2,200 r.p.m.; 17.4 m.p.h. per 1,000 r.p.m. (top gear). Approx. m.p.g. 22-25 (12.8-11.3 litres per 100 km).

Best acceleration, 10-30 m.p.h., 6.1 sec; 20-40 m.p.h., 6.4 sec; 30-50 m.p.h., 8.3 sec. Through gears, 0-30 m.p.h., 5.7 sec; 0-50 m.p.h., 14.1 sec; 0-60 m.p.h., 22.1 sec. Maximum speed, 76 m.p.h. (Road Test, March 28, 1952).

Six-cylinder Running weight, 3,082 lb (1,401 kg). 55.24 b.h.p. per ton. Maximum torque, 137.8 lb ft at 2,000 r.p.m.; 20 m.p.h. at 1,000 r.p.m. (top gear). Approx. m.p.g. 16-21 (17.7-13.5 litres per 100 km).

Best acceleration, 10-30 m.p.h., 6.0 sec; 20-40 m.p.h., 11.1 sec. Through gears, 0-30 m.p.h., 6.8 sec; 0-50 m.p.h., 14.4 sec; 0-60 m.p.h., 21.9 sec; 0-70 m.p.h., 32.8 sec. Maximum speed, 83 m.p.h. (Road Test, December 30, 1949).

Connaught

Connaught Engineering, Portsmouth Road, Send, Surrey.

SUCH firms as Connaught have always existed in the British motor industry, and serve a very useful purpose. Recognizing that small sections of motorists have definite tastes, and wants that are not normally satisfied by the big manufacturers, they take a suitable product and adapt it to what they judge to be the needs of this market. Thus the Connaught car is based on Lea-Francis components and is a "hot" sports car for the enthusiast. The compression ratio of the 1,767 c.c. engine is lifted to 8.25 to 1. Only one product is made, the competition two-seater.

The firm was founded in 1948, its principals being two drivers who had made a considerable name in sporting events.

L3 and L3-RR: 4 cyl, 75 x 100 mm (2.95 x 3.94 in), 1,767 c.c. (107.79 cu in); o.h.v.; compression ratio, 8.5 to 1. 4 speeds, synchromesh (overall ratios, 4.3, 5.16, 7.78 and 12.9 to 1); central control.

Suspension, independent front, torsion bar; $\frac{1}{2}$ -elliptic rear. Brakes, Girling hydro-mechanical. Wheelbase, 8ft 3 in (251 cm); widest track, 4ft 5 in (135 cm). Overall length, L3, 12ft 4 in (376 cm); L3-RR, 12ft 9 in (389 cm). Width,

5ft (152.4 cm). Height, 3ft 6 in (106.68 cm). Ground clearance, L3, 6 in (15.24 cm); L3-RR, 5 in (12.70 cm). Turning circle, 35ft (1,066.8 cm). Weight (approx.), L3, 2,130 lb (966 kg); L3-RR, 1,905 lb (864 kg).

Tank capacity, 15 Imperial gallons (68 litres). Tyre size, 6.00-16 in. Battery, two 6-volt, 62 amp-hour in series.

L3 2-seater £1,290
L3-RR 2-seater £1,250

Daimler

The Daimler Co., Ltd., Coventry.

AS the first of Britain's car manufacturers that has survived, the Daimler company has an enviable title; it began in 1896, and the Royal warrant has been held since 1901. The products of the firm are intentionally in the high-priced examples of sound engineering and first-class workmanship that do so much to make the reputation of British engineering, and the cars appeal to owners who value refinement, elegance of appearance, and an extraordinary ease of control.

The last is gained chiefly by the use of hydraulic transmission, comprising the fluid flywheel and an epicyclic gear box controlled by preselector quadrant on the steering wheel; actual engagement of the gear is by the depression of a pedal to its fullest extent. Daimler pioneered this form of transmission as long ago as 1932, and the fact is of especial interest now that basically similar transmission principles have become immensely popular in the U.S.A.

Most recent model in the Daimler range is the 3-litre Regency, and the range is surprisingly wide for this type of com-

pany. It includes a Special Sports model using the 2 1/2-litre engine, but with the power output stepped up to 85 b.h.p. at 4,200 r.p.m., and the magnificent Straight Eight, the largest car made, with an engine capacity of 5 1/2 litres. In spite of its dimensions, however, this great vehicle is an education to the driver in its ease of control. The physical size is never an embarrassment.

Consort: 6 cyl., 60.6 x 110.49 mm (2.74 x 4.35 in), 2,522 c.c. (153.9 cu in); o.h.v.; compression ratio, 7 to 1; 70 b.h.p. at 4,200 r.p.m. 4 speeds, pre-selector (overall ratios, 4.30, 6.7, 9.97 and 17.54 to 1); steering column control.

Suspension, independent front coil springs; $\frac{1}{2}$ -elliptic rear. Brakes, Girling hydro-mechanical. Wheelbase, 9ft 6 in (289.54 cm); widest track, 4ft 4 in (132 cm). Overall length, 15ft 1 1/2 in (462 cm). Width, 5ft 4 1/2 in (163.83 cm). Height, 5ft 5 in (165 cm). Ground clearance, 6 in (15.24 cm). Turning circle, 41ft (1,250 cm). Weight (approx.), 3,556 lb (1,616 kg).

Tank capacity, 14 Imperial gallons (63.64 litres). Tyre size, 6.00 16 in. Battery, 12-volt, 69 amp-hours.

Saloon £1,465

Special Sports: Specification as for Consort, except for: 85 b.h.p. at 4,200 r.p.m.; pre-selector (overall ratios, 3.55, 4.66, 7.94 and 14.57 to 1). Overall length, 15ft 7 1/2 in (476.25 cm). Height, 5ft 2 in (157.5 cm). Weight (approx.), 3,700 lb (1,682 kg).

Drop-head coupé £1,775

Regency: 6 cyl., 76.2 x 107.9 mm (3 x 4.25 in), 2,952 c.c. (180 cu in); o.h.v.; compression ratio, 6.7 to 1; 90 b.h.p. at 4,100 r.p.m. 4 speeds, pre-selector (overall ratios, 4.3, 6.7, 9.98 and 17.54 to 1); steering column control.

Suspension, independent front, coil springs; $\frac{1}{2}$ -elliptic rear. Brakes, Girling hydro-mechanical. Wheelbase, 9ft 6 in (289.54 cm); widest track, 4ft 9 in (144.78 cm). Overall length, 15ft 11 in (483 cm). Width, 5ft 11 in (180.34 cm). Height, 5ft 5 in (165 cm). Ground clearance, 7 in (17.8 cm). Turning circle, 42ft (1,280 cm). Weight (approx.), 4,000 lb (1,818 kg).

Connaught two-seater sports model.





Frazer-Nash drop-head coupé.

BRITISH CARS FOR THE WORLD

Tank capacity, 16 Imperial gallons (72.73 litres). Tyre size, 6.50-16in. Battery, 12-volt, 60 amp-hour.

Saloon

£1,500

Straight Eight: 8 cyl., 85.09 x 120.015 mm (3.35 x 4.725 in), 5,460 c.c. (333.2 cu in); o.h.v.; compression ratio, 6.3 to 1; 150 b.h.p. at 3,600 r.p.m. 4 speeds, preselector (overall ratios, 4.09, 6.24, 9.65 and 17.05 to 1); steering column control.

Suspension, independent front, coil springs; elliptic rear. Brakes, Girling hydro-mechanical.

Wheelbase, 12ft 3in (373.42 cm); widest track, 5ft 3in (160 cm). Overall length, 11ft 6in (353.84 cm). Width, 6ft 1in (187 cm). Height, 6ft (182.9 cm). Ground clearance, 7in (17.78 cm).

Turning circle, 50ft (15.24 m). Weight (approx.), 5,900 lb (2,681 kg).

Tank capacity, 20 Imperial gallons (90.92 litres). Tyre size, 8.00-17in. Battery, 12-volt, 110 amp-hour.

Limousine

£3,570

ROAD TEST SUMMARY

Consul: Running weight, 3,520 lb (1,600 kg). 44.54 b.h.p. per ton. Maximum torque, 110 lb ft at 2,000 r.p.m.; 18.3 m.p.h. per 1,000 r.p.m. (top gear). Approx. m.p.g., 17-20 (16.6-14.1 litres per 100 km).

Best acceleration, 10-30 m.p.h., 6.4 sec; 30-50 m.p.h., 15.7 sec. Through gears, 0-30 m.p.h., 8.1 sec; 0-50 m.p.h., 19.2 sec; 0-60 m.p.h., 30.1 sec. Maximum speed, 76-77 m.p.h. (Road Test, June 16, 1950).

Special Sports: Running weight, 3,582 lb (1,628 kg). 53.15 b.h.p. per ton. Maximum torque, 120 lb ft at 2,000 r.p.m.; 16.5 m.p.h. (overdrive, 22.5 m.p.h. per 1,000 r.p.m. (top gear). Approx. m.p.g., 18-24 (15.7-11.8 litres per 100 km).

Best acceleration, 10-30 m.p.h., 7.1 sec; 30-50 m.p.h., 13.2 sec (overdrive, 20.4 sec). Through gears, 0-30 m.p.h., 8.3 sec; 0-50 m.p.h., 19.7 sec; 0-60 m.p.h., 27.5 sec; 0-70 m.p.h., 41.9 sec. (Road Test, May 12, 1950).

Dellow

Dellow Motors, Ltd., Alvechurch, Birmingham.

ANOTHER of the strictly specialist companies which develop certain proprietary makes, in this instance the Ford Ten. The Dellow emphasis is towards competition work and the results have been a long list of successes in British reliability trials. Dellow began their activities in 1947 by offering service to competition drivers, and expanded into the building of various hybrid "specials." Work finally concentrated on the Ford Ten, and this remains the basis of the product today. The car is a sports two-seater.

Mark II and Mark III: 4-cyl., 63.5 x 92.5 mm (2.5 x 3.64 in); 1,172 c.c. (71.55 cu in); side valves; compression ratio, 6.16 to 1; 30 b.h.p. at 4,200 r.p.m. 3 speeds, synchromesh (overall ratios, 5.5, 9.71 and 16.88 to 1); central control.

Suspension, front, transverse spring; coil rear. Brakes, Girling mechanical.

Wheelbase, Mark II, 6ft 11in (210.84 cm); Mark III, 7ft 11in (241.34 cm); widest track, 3ft 9in (114 cm). Overall length, 11ft 8in (355.62 cm). Width, 4ft 5in (134.62 cm). Height, 4ft 3in (129.54 cm). Ground clearance, 9in (24 cm). Turning circle, 21ft (6.40 m). Weight (approx.), 1,272 lb (578 kg).

Tank capacity, 15 Imperial gallons (68 litres). Tyre size, 4.50-17in. Battery, 6-volt, 60 amp-hour.

Sports 2-seater £497

Sports tourer £530

Ford

Ford Motor Co., Ltd., Dagenham, Essex.

NO one would deny the international Ford company a unique reputation, and the British example does its share in maintaining that. With a policy that recalls the ideals of the great founder, Henry Ford himself, it strives to produce the best car possible within the price range that appeals to the largest car market. For years the British company has succeeded in doing this, and it has been consistent in refusing to introduce new models for frivolous reasons; when, however, new models are introduced by Dagenham the event is of outstanding importance.

The latest products, Consul and Zephyr, deserve the attention they have attracted, for their design has considerable originality, up-to-date style with a gain in practicality, and a performance in keeping.

The Zephyr, indeed, with the added virtue of the six-cylinder engine, is, quite frankly, a car to astonish the driver trying it for the first time. Front suspension is independent, using coil springs in an original manner, and unit construction is employed for body and chassis. Body styles for both models are the same.

The smaller cars are continued—Perfect and Anglia, the Anglia with a Ten engine for export. They are robust cars intended for a workaday life that is as long as the owner—who has an unrivalled service organization at his command—likes to make it.

Anglia: 4 cyl., 56.6 x 92.5 mm (2.23 x 3.64 in), 933 c.c. (56.93 cu in); side valves; compression



Dellow sports two-seater.

ratio, 6.3 to 1; 23.4 b.h.p. at 4,000 r.p.m. 3 speeds, synchromesh (overall ratios, 5.5, 10.76 and 18.72 to 1); central control.

Suspension, front and rear, transverse $\frac{1}{2}$ -elliptic springs. Brakes, Girling mechanical.

Wheelbase, 7ft 6in (228.6 cm); widest track, 3ft 9in (114.3 cm). Overall length, 12ft 8in (386.6 cm). Width, 4ft 8in (143.5 cm). Height, 5ft 4in (163.2 cm). Ground clearance, 8in (22.5 cm). Turning circle, 34ft (10.59 cm). Weight (approx.), 1,636 lb (742 kg).

Tank capacity, 7 Imperial gallons (31.82 litres). Tyre size, 4.50-17in. Battery, 6-volt, 87 amp-hour.

Saloon, 2-door £330

Pretest: 4 cyl., 63.5 x 92.5 mm (2.5 x 3.64 in), 1,172 c.c. (71.55 cu in); side valves; compression ratio, 6.16 to 1; 30.1 b.h.p. at 4,000 r.p.m. 3 speeds, synchromesh (overall ratios, 5.5, 9.71 and 16.89 to 1); central control.

Suspension, front and rear, transverse $\frac{1}{2}$ -elliptic springs. Brakes, Girling mechanical.

Wheelbase, 7ft 10in (238.8 cm); widest track, 3ft 9in (114.3 cm). Overall length, 12ft 11in (394.3 cm). Width, 4ft 8in (142.9 cm). Height, 5ft 3in (161.3 cm). Ground clearance, 8in (22 cm). Turning circle, 36ft (11.05 cm). Weight (approx.), 1,808 lb (820 kg).

Tank capacity, 7 Imperial gallons (31.82 litres). Tyre size, 5.00-16in. Battery, 6-volt, 87 amp-hour.

Saloon, 4-door £390

Consult: 4 cyl., 79.37 x 76.2 mm (3.125 x 3in),

Suspension, independent front, coil springs; $\frac{1}{2}$ -elliptic rear. Brakes, Girling hydraulic two-leading shoe.

Wheelbase, 8ft 8in (264.2 cm); widest track, 4ft 2in (127 cm). Overall length, 14ft 3in (436.2 cm). Width, 5ft 4in (162.5 cm). Height, 5ft 0in (152.4 cm). Ground clearance, 7in (17.78 cm). Turning circle, right, 42ft (12.80 cm). Weight (approx.), 2,447 lb (1,110 kg).

Tank capacity, 9 Imperial gallons (40.92 litres). Tyre size, 6.40-13in. Battery, 12-volt, 45 amp-hour.

Saloon, 4-door £560

Convertible de ville £650

ROAD TEST SUMMARY

Anglia Eight: Running weight, 1,687 lb (767 kg). 31.07 b.h.p. per ton. Maximum torque, 26.5 lb ft at 2,300 r.p.m.; 13.7 m.p.h. per 1,000 r.p.m. (top gear). Approx. m.p.g., 36-40 (7.9-7.1 litres per 100 km).

Best acceleration, 10-30 m.p.h., 9.7 sec; 30-50 m.p.h., 35.7 sec. Through gears, 0-30 m.p.h., 9.4 sec; 0-50 m.p.h., 48.1 sec. Maximum speed, 59 m.p.h. (Road Test, November 18, 1949).

Anglia Ten: Running weight, 1,708 lb (776 kg). 30.58 b.h.p. per ton. Approx. m.p.g., 30-40 (9.4-7.1 litres per 100 km).

Best acceleration, 10-30 m.p.h., 7.0 sec; 30-50 m.p.h., 18.5 sec. Through gears, 0-30 m.p.h., 8.8 sec; 0-50 m.p.h., 28.3 sec. Maximum

Frazer-Nash

A.F.N., Ltd., Falcon Works, London Road, Isleworth, Middlesex.

THIS is a very fast competition car using the six-cylinder Bristol engine, and benefiting from the long experience which this firm has in building such cars, for the first Frazer-Nashes were chain-driven performers that made a considerable name in the nineteen-twenties and thirties. The latest products have more than maintained that reputation in sporting events. With a compression ratio of 8.5 to 1, 120 b.h.p. is extracted from the 2-litre engine at 5,500 r.p.m. and this, in a light tubular chassis with sporting body, results in excellent performance figures.

Le Mans Replica and Mille Miglia: 6 cyl., 66 x 96 mm (2.598 x 3.779 in), 1,971 c.c. (120.28 cu in); o.h.v.; compression ratio, 8.5 or 9.5 to 1; 125 b.h.p. at 5,500 r.p.m. 4 speeds, synchromesh (alternative ratios to choice); central control.

Suspension, independent front, transverse spring; torsion bar rear. Brakes, Lockheed hydraulic, two-leading shoe.

Wheelbase, 8ft (243.84 cm); widest track, 4ft (121.92 cm). Overall length, Le Mans Replica,



Ford four-cylinder Consul (in Cologne).

1,508 c.c. (92 cu in); o.h.v.; compression ratio, 8.5 to 1; 47 b.h.p. at 4,400 r.p.m. 3 speeds, synchromesh (overall ratios, 4.556, 7.48 and 12.93 to 1); steering column control.

Suspension, independent front coil springs; $\frac{1}{2}$ -elliptic rear. Brakes, Girling hydraulic, two-leading shoe.

Wheelbase, 8ft 4in (254 cm); widest track, 4ft 2in (127 cm). Overall length, 13ft 6in (412.9 cm). Width, 4ft 4in (134.3 cm). Height, 5ft 0in (152.4 cm). Ground clearance, 6in (16.8 cm). Turning circle, left, 40ft (12.34 cm). Weight (approx.), 2,262 lb (1,026 kg).

Tank capacity, 6 Imperial gallons (40.92 litres). Tyre size, 5.90-13in. Battery, 12-volt, 45 amp-hour.

Saloon, 4-door £495

Zephyr Six: 6 cyl., 79.37 x 76.2 mm (3.125 x 3in), 2,262 c.c. (138 cu in); o.h.v.; compression ratio, 6.8 to 1; 68 b.h.p. at 4,000 r.p.m. 3 speeds, synchromesh (overall ratios, 4.444, 7.297 and 12.62 to 1); steering column control.

speed, 63 m.p.h. (Road Test, January 21, 1949).

Consult: Running weight, 2,415 lb (1,098 kg). 43.6 b.h.p. per ton. Maximum torque, 74 lb ft at 2,400 r.p.m.; 14.92 m.p.h. per 1,000 r.p.m. (top gear). Approx. m.p.g., 24-28 (11.8-10.1 litres per 100 km).

Best acceleration, 10-30 m.p.h., 7.6 sec; 30-50 m.p.h., 15.1 sec. Through gears, 0-30 m.p.h., 7.7 sec; 0-50 m.p.h., 19.7 sec; 0-60 m.p.h., 31.1 sec. Maximum speed, 75 m.p.h. (Road Test, April 13, 1951).

Zephyr Six: Running weight, 2,697 lb (1,226 kg). 52.4 b.h.p. per ton. Maximum torque, 112 lb ft at 2,000 r.p.m.; 16.38 m.p.h. per 1,000 r.p.m. (top gear). Approx. m.p.g., 23-25 (12.3-11.3 litres per 100 km).

Best acceleration, 10-30 m.p.h., 4.5 sec; 30-50 m.p.h., 10.2 sec; 40-60 m.p.h., 11.9 sec. Through gears, 0-30 m.p.h., 5.5 sec; 0-50 m.p.h., 14.1 sec; 0-60 m.p.h., 21.1 sec; 0-70 m.p.h., 32.1 sec. Maximum speed 81 m.p.h. (Road Test, November 25, 1951).

11ft 9in (358.14 cm); Mille Miglia, 12ft 6in (381 cm). Width, 4ft 10in (147.32 cm).

Height, 3ft 2in (96.5 cm). Ground clearance, 7in (17.78 cm). Turning circle, Le Mans Replica, 28ft (8.53 cm); Mille Miglia, 29ft (88.4 cm). Weight (approx.), Le Mans Replica, 1,540 lb (700 kg); Mille Miglia, 1,764 lb (818 kg).

Tank capacity, 17 Imperial gallons (77.28 litres). Tyre size, 5.25-16in. Battery, 12-volt, 38 amp-hour.

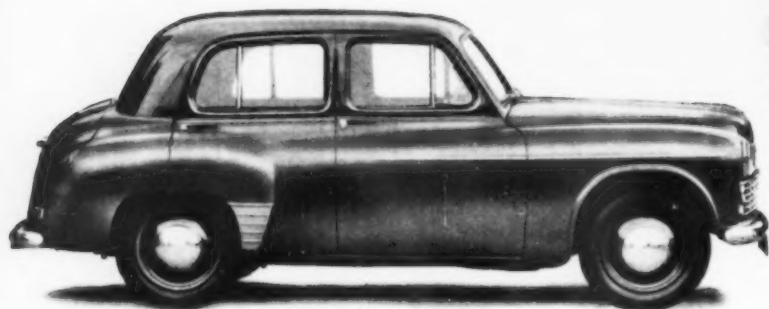
Le Mans Replica £1,975

Mille Miglia £2,250

2-litre: Specification as for Le Mans Replica, except for: compression ratio, 7.5 to 1; 85 b.h.p. at 4,500 r.p.m. 4 speeds, synchromesh (overall ratios, 3.6, 4.65, 7.85 and 15.5 to 1; other ratios available).

Wheelbase, 8ft (243.84 cm); widest track, 4ft 2in (127 cm). Overall length, 12ft 8in (386 cm). Height, 3ft 1in (94 cm). Weight (approx.), 1,988 lb (936 kg).

Drop-head coupe £2,100



Hillman Minx saloon. Inset: On a record run from England to Cape Town.



BRITISH CARS FOR THE WORLD

Healey

Donald Healey Motor Co., Ltd., The
Cape, Warwick.

THE Healey story is one of success in a difficult field, for Healey began manufacture in 1946 in the hard post-war world of shortages; his success can be judged by the reputation which his cars have today, and by the fact that the American Nash company is in association with him in the production of the Nash-Healey, in which the power unit is the U.S.A. 4.1-litre six-cylinder. Two other units are used by the Warwick manufacturer in his range—the 3-litre Alvis, a high-performance six-cylinder, and the 2.4-litre Riley, a "big four."

These are performance cars, but with a high measure of driver and passenger comfort, and their specification gains from the long experience that Donald Healey has had in competition, for one of his victories was in the 1931 Monte Carlo Rally.

2.4-Litre: 4 cyl., 80.5 x 120 mm (3.169 x 4.725 in), 2,443 c.c. (149 cu in); o.h.v.; compression ratio, 6.9 to 1; 105 b.h.p. at 4,800 r.p.m.; 4 speeds, synchromesh (overall ratio, 3.5, 4.96, 7.34 and 12.76 to 1); central control.

Suspension, independent front, coil springs; coil rear. Brakes, Girling hydraulic, two-leading shoe.

Wheelbase, 8ft 6in (259 cm); widest track, 4ft 5in (134.62 cm). Overall length, 14ft 8in (447 cm). Width, 5ft 5in (165 cm). Height, 4ft 7in (139.2 cm). Ground clearance, 7in (17.78 cm). Turning circle, 35ft (10.67 m). Weight (approx.), 2,800 lb (1,263 kg).

Tank capacity, 14 Imperial gallons (63.64 litres). Tyre size, 5.75-15in. Battery, 12-volt, 63 amp-hour.

Tickford saloon £1,600
Abbott coupé £1,670

3-Litre: 6 cyl., 84 x 90 mm (3.31 x 3.54 in), 2,993 c.c. (242.6 cu in); o.h.v.; compression ratio, 7 to 1; 106 b.h.p. at 4,200 r.p.m.; 4 speeds, synchromesh (overall ratios, 3.77, 5.0, 6.52 and 11.1 to 1); central control.

Suspension, independent front, coil springs; coil rear. Brakes, Girling two-leading shoe. Wheelbase, 8ft 6in (259 cm); widest track, 4ft 6in (137 cm). Overall length, 14ft 6in (441.94 cm). Width, 5ft 5in (165 cm). Height, 4ft 7in (hood raised), (139.2 cm). Ground clearance, 7in (17.78 cm). Turning circle, 35ft (10.67 m).

Tyre size, 5.90-15in. Battery, 12-volt, 63 amp-hour.

Three-seater £1,600

Nash-Healey: 6-cyl., 88.9 x 111.12 mm (3.5 x 4.375 in), 4,138 c.c. (252.6 cu in); o.h.v.; compression ratio, 8.25 to 1; 130 b.h.p. at 4,000 r.p.m.; 5 speeds, synchromesh (overall ratios, 3.54, 5.48 and 9.09 to 1); central control.

Suspension, independent front, coil springs; coil rear. Brakes, Bendix, duo-servo hydraulic. Wheelbase, 8ft 6in (259 cm); widest track, 4ft 6in (137 cm). Overall length, 14ft 2in (431.78 cm). Width, 5ft 5in (165 cm). Ground clearance, 6in (15.24 cm). Weight (approx.), 2,446 lb (1,112 kg).

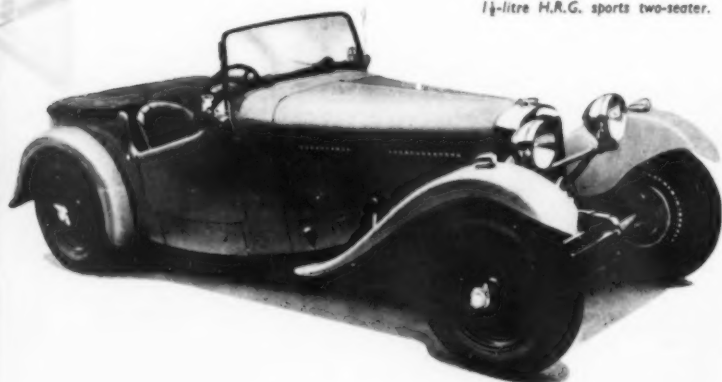
Tank capacity, 18 Imperial gallons (81.82 litres). Tyre size, 6.40-15in. Battery, 6-volt, 105 amp-hour.

No price quoted in Great Britain.

ROAD TEST SUMMARY

2.4-Litre Saloon: Running weight, 2,961 lb (1,346 kg). 60.3 b.h.p. per ton laden. Maximum torque, 136 lb ft at 3,000 r.p.m.; 20.6 m.p.h. per 1,000 r.p.m. (top gear). Approx. m.p.s. 22-26 (12.8-10.8 litres per 100 km).

1½-litre H.R.G. sports two-seater.



Best acceleration, 10-30 m.p.h., 5.1 sec.; 30-50 m.p.h., 7.4 sec.; 40-60 m.p.h., 7.9 sec. Through gears, 0-30 m.p.h., 5.0 sec.; 0-50 m.p.h., 10.5 sec.; 0-60 m.p.h., 14.6 sec.; 0-70 m.p.h., 19.6 sec. Maximum speed, 104.6 m.p.h. (Road Test, March 14, 1952).

Hillman

Hillman Motor Car Co., Ltd., Ryton-on-
Dunsmore, Coventry.

AFTER an early start in 1907, the Hillman company was taken over by the Humber company in 1928 and was finally merged into the Rootes Group in 1932. Car production is centred in the one model—the deservedly well-known Hillman Minx. This is an excellent example of British quality for money, and of the endeavour of its manufacturers to study every aspect of consumer appeal.

The styling, for instance, bears the stamp of real quality in its earnest endeavour to give maximum room in a fairly small car without detracting from external appearance. The Minx succeeds in this without question.

The superficial, however, are not the only virtues of the Minx, for one of these cars has recently broken the record of the London to Cape Town trip, one of the world's toughest motoring journeys. The fact speaks well for the 1,265 c.c. engine that powers the Minx.

Three body styles are available—saloon, convertible and estate car. The last is an all-steel construction and makes an immediate appeal with its enormous space and its practicality.

Minx, Mark V: 4 cyl., 65 x 95 mm (2.56 x 3.74 in), 1,265 c.c. (77.2 cu in); side valves; compression ratio, 6.63 to 1; 37.5 b.h.p. at 4,200 r.p.m.; 4 speeds, synchromesh (overall ratios, 5.22, 7.78, 12.89 and 18.60 to 1); steering column control.

Suspension, independent front, coil springs; elliptic rear. Brakes, Lockheed, two-leading shoe.

Wheelbase, 7ft 9in (236.2 cm); widest track, saloon and coupé, 4ft 0in (123.5 cm); estate car, 4ft 2in (128.3 cm). Overall length, saloon and coupé, 13ft 1in (400 cm); estate car, 13ft 8in (416.6 cm). Width, 5ft 2in (157.5 cm). Height, 5ft 0in (152.4 cm). Ground clearance, 7in (17.8 cm). Turning circle, 33ft (10.06 m). Weight (approx.), saloon, 1,995 lb (905 kg); coupé, 2,016 lb (914 kg); estate car, 2,142 lb (971 kg).

Tank capacity, 7½ Imperial gallons (33 litres). Tyre size, saloon and coupé, 5.60-16in; estate car, 5.50-15in. Battery, 12-volt, 38 amp-hour.

Saloon £470
Coupé £540
Estate car £540

ROAD TEST SUMMARY

Saloon: Running weight, 1,211 lb (544 kg). 39.60 b.h.p. per ton. Maximum torque, 58.33 lb ft at 2,200 r.p.m.; 14.2 m.p.h. per 1,000 r.p.m.



Humber Super Snipe.

(top gear). Approx. m.p.g., 30-37 (9.4-7.6 litres per 100 km).

Best acceleration, 10-30 m.p.h., 6.7 sec; 30-50 m.p.h., 16.8 sec. Through gears, 0-30 m.p.h., 8.9 sec; 0-50 m.p.h., 23.9 sec; 0-60 m.p.h., 40.2 sec. Maximum speed, 67 m.p.h. (Road Test, December 2, 1949).

Coupe Running weight, 2,144 lb (974.5 kg). 30 b.h.p. per ton. Maximum torque, 58.3 lb ft at 2,200 r.p.m.; 14.3 m.p.h. per 1,000 r.p.m. (top gear). Approx. m.p.g., 26-35 (10.9-8.1 litres per 100 km).

Best acceleration, 10-30 m.p.h., 6.6 sec; 30-50 m.p.h., 15.8 sec; 40-60 m.p.h., 20.4 sec. Through gears, 0-30 m.p.h., 7.3 sec; 0-50 m.p.h., 20.3 sec; 0-60 m.p.h., 32.3 sec. Maximum speed, 70 m.p.h. (Road Test, December 21, 1951).

Estimate Car Running weight, 2,244 lb (1,020 kg). 37.4 b.h.p. per ton. Maximum torque, 58.3 lb ft at 2,200 r.p.m.; 14.3 m.p.h. per 1,000 r.p.m. (top gear). Approx. m.p.g., 29-37 (9.7-7.6 litres per 100 km).

Best acceleration, 10-30 m.p.h., 7 sec; 30-50 m.p.h., 17.6 sec. Through gears, 0-30 m.p.h., 8.1 sec; 0-50 m.p.h., 22.7 sec. Maximum speed, 69 m.p.h. (Road Test, September 21, 1951).

H.R.G.

H.R.G. Engineering Co., Ltd., Oakcroft Road, Kingston By-pass, Tolworth, Surrey.

PRODUCTS of this firm have now seventeen years of experience behind them, for the H.R.G. began its career in 1935. The design retains the best of the traditional features of British sports cars, with a fairly hard suspension based, front and rear, on leaf springing, a light body and an overhead camshaft engine. There are two engine sizes—1,100 c.c. and 1,496 c.c.

H.R.G. cars have done very well in races and rallies; as might be expected from the policy of the firm, the available models are confined to two-seater sports types.

1100: 4 cyl., 60×95 mm (2.362×3.740in). 1,074 c.c. (65.54 cu in); o.h.c.; compression ratio, 7.75 to 1; 44 b.h.p. at 5,200 r.p.m. 4 speeds, synchromesh (overall ratios, 4.55, 6.67, 10.32 and 16.34 to 1); central control.

Suspension, front, i-elliptic springs; j-elliptic rear. Brakes, H.R.G. mechanical.

Wheelbase, 8ft 3in (253 cm); widest track, 4ft (121.9 cm). Overall length, 11ft 10in (361.97 cm). Width, 4ft 7in (139.68 cm). Height, 4ft 11in (128 cm). Ground clearance, 7in (17.78 cm). Turning circle, 32ft (975 cm). Weight (approx.), 1,512 lb (685.8 kg).

Tank capacity, 10 Imperial gallons (45.46 litres). Tyre size, 5.50-16in. Battery, 12-volt, 50 amp-hour.

Sports 2-seater £820

14-litre: 4-cyl., 68×103 mm (2.677×4.05in). 1,496 c.c. (91.293 cu in); o.h.c.; compression ratio, 7 to 1; 65 b.h.p. at 4,800 r.p.m. 4 speeds, synchromesh (overall ratios, 4.0, 5.86, 9.06 and 14.37 to 1); central control.

Suspension, front, j-elliptic springs; j-elliptic rear. Brakes, H.R.G. mechanical.

Wheelbase, 8ft 7in (262.8 cm); widest track, 4ft (121.9 cm). Overall length, 12ft (368 cm).

Width, 4ft 7in (139.68 cm). Height, 4ft 11in (128 cm). Ground clearance, 7in (17.78 cm). Turning circle, 32ft (975 cm). Weight (approx.), 1,624 lb (737 kg).

Tank capacity, 10 Imperial gallons (45.46 litres). Tyre size, 5.50-16in. Battery, 12-volt, 50 amp-hour.

Sports 2-seater £895

Humber

Humber, Ltd., Ryton-on-Dunsmore, Coventry.

ONE of the oldest names in British car manufacture is possessed by the Humber company, although in its earliest days in 1867 the company's products were two-wheeled only. The first car appeared as early as 1899. Nowadays this firm is a part of the Rootes Group, fitting into the manufacturing scheme of that group by producing the biggest cars that come from the Ryton-on-Dunsmore factory. Thus the Snipe models have six-cylinder engines of over 4-litre capacity and bodies are correspondingly roomy. These facts have made the big Humber models very popular overseas, although the roominess of the Hawk is powered by a 2,267 c.c. engine and therefore appeals to those buyers who are content with a lesser performance, achieved with greater economy of fuel. None the less, the Hawk shows up well against the stop-watch.

Humber cars are by no means expensive by modern standards, and the Super Snipe series has rivalled the American car for many years as a result of this economy in costs. The difference in price is there,

of course, and is accounted for by the vastly bigger runs that the American home market demand permits. The Rootes response to this handicap is to build into the Humber range as much quality as it is possible to provide at the price.

Hawk: 4 cyl., 81×110 mm (3.1875×4.33in). 2,267 c.c. (138.2 cu in); side valves, compression ratio, 6.32 to 1; 58 b.h.p. at 3,400 r.p.m. 4 speeds, synchromesh (overall ratios, 4.55, 6.78, 11.24 and 16.19 to 1); steering column control. Suspension, independent front, coil springs; j-elliptic rear. Brakes, Lockheed, two-leading shoe.

Wheelbase, 8ft 9in (268 cm); widest track, 4ft 9in (144.8 cm). Overall length, 14ft 6in (442 cm). Width, 5ft 10in (177.8 cm). Height, 5ft 4in (164.5 cm). Ground clearance, 7.18in (18.3 cm). Turning circle, 37ft (1,100 cm). Weight (approx.), 2,772 lb (1,256 kg).

Tank capacity, 10 Imperial gallons (45 litres). Tyre size, 6.40-15in. Battery, 12-volt, 51 amp-hour.

Saloon £725

Super Snipe: 6 cyl., 85×120 mm (3.35×4.72in). 4,086 c.c. (249.23 cu in); side valves; compression ratio, 6.25 to 1; 100 b.h.p. at 3,400 r.p.m. 4 speeds, synchromesh (overall ratios, 4.09, 5.89, 9.56 and 15.95 to 1); steering column control.

Suspension, independent front, transverse spring; j-elliptic rear. Brakes, Lockheed, two-leading shoe.

Wheelbase, 9ft 9in (299.5 cm); widest track, 5ft 1in (154.9 cm). Overall length, 15ft 10in (484.5 cm). Width, 6ft 2in (189.8 cm). Height, 5ft 5in (167 cm). Ground clearance, 7in (17.8 cm). Turning circle, 43ft (1,307 cm). Weight (approx.), 3,829 lb (1,737 kg).

Tank capacity, 15 Imperial gallons (68 litres). Tyre size, 6.50-16in. Battery, 12-volt, 64 amp-hour.

Saloon £1,045

Limousine £1,070

Pullman and Imperial: Specification as for Super Snipe, except as follows:—

Wheelbase, 10ft 11in (332.7 cm); widest track,

3-litre Healey sports coupé.





Jowett Javelin de luxe saloon.

BRITISH CARS FOR THE WORLD . . .

5ft 2½in (158.1 cm). Overall length, 17ft 7½in (538.2 cm). Ground clearance, 7½in (19 cm). Turning circle, 48ft (14.78 m). Weight (approx.), Pullman, 4,445 lb (2,016 kg); Imperial, 4,417 lb (2,003 kg). Tyre size, 7.00-16in.

Pullman limousine £1,600
Imperial saloon £1,600

ROAD TEST SUMMARY

Hawk: Running weight, 2,996 lb. 43.36 b.h.p. per ton. Maximum torque, 110 lb ft at 1,800 r.p.m.; 17 m.p.h. per 1,000 r.p.m. (top gear). Approx. m.p.g., 21-23 (13.5-12.3 litres per 100 km).

Best acceleration, 10-30 m.p.h., 5.7 sec; 30-50 m.p.h., 12.0 sec. Through gears, 0-30 m.p.h., 7.1 sec; 0-50 m.p.h., 19.3 sec; 0-60 m.p.h., 30.4 sec. Maximum speed, 69-70 m.p.h. (Road Test, December 29, 1950).

Super Salpinx: Running weight, 3,987 lb (1,812 kg). 56.4 b.h.p. per ton. Maximum torque, 197.5 lb ft at 1,200 r.p.m.; 20 m.p.h. per 1,000 r.p.m. (top gear). Approx. m.p.g., 16-18 (17.7-15.7 litres per 100 km).

Best acceleration, 10-30 m.p.h., 4.7 sec; 30-50 m.p.h., 9.9 sec. Through gears, 0-30 m.p.h., 5.9 sec; 0-50 m.p.h., 14.5 sec; 0-60 m.p.h., 21.2 sec; 0-70 m.p.h., 31.3 sec. Maximum speed, 84 m.p.h. (Road Test, March 16, 1951).

Imperial: Running weight, 4,606 lb (2,094 kg). 48.63 b.h.p. per ton. Maximum torque, 197.5 lb ft at 1,200 r.p.m.; 20.9 m.p.h. per 1,000 r.p.m. (top gear). Approx. m.p.g., 13-15 (21.7-18.5 litres per 100 km).

Best acceleration, 10-30 m.p.h., 5.7 sec; 30-50 m.p.h., 13.0 sec. Through gears, 0-30 m.p.h., 7.7 sec; 0-50 m.p.h., 18.1 sec; 0-60 m.p.h., 26.5 sec. Maximum speed, 79 m.p.h. (Road Test, October 21, 1949).

Jaguar

Jaguar Cars, Ltd., Coventry.

IT is only fair to say that this company has established a new category in British car manufacture by providing a specialist car at a price that suggests quantity production, for in all conscience Jaguar cars are remarkably cheap for what they offer. Both Mark VII saloon and XK120 models will surpass 100 m.p.h., and their acceleration figures match this very high top speed. But neither saloon nor open model, nor the fixed-head coupé on the XK120 chassis, concedes anything in the way of comfort in achieving this performance, which must be mainly attributed to an outstanding engine design.

The list of successes in sporting events that the Jaguar company has recently achieved is too long to detail, but has

been recognized by the award of the Dewar Trophy, a trophy that is presented by the Royal Automobile Club of Britain for the most meritorious achievement of the year; it is hard won, for it is not necessarily annually awarded.

Jaguar enter freely into sporting competitions and have also produced a purely sporting machine, the XK120 C. This car is as yet unchallenged in its class and will no doubt add to the company's laurels in the coming season. In the meantime the superlatively smart saloon will continue to attract the orders that have flown in since it first appeared at the 1950 London Show.

Mark VII: 6 cyl., 83 x 106 mm (3.267 x 4.173 in). 3,442 c.c. (210 cu in); twin o.h.c.; compression ratio, 7 to 1 (optional, 8 to 1); 160 b.h.p. at 5,200 r.p.m. 4 speeds, synchromesh (overall ratios, 4.27, 5.84, 8.46 and 14.41 to 1); central control.

Suspension, independent front, torsion bar; j-elliptic rear. Brakes, Girling hydraulic with vacuum servo.

Wheelbase, 10ft (304.8 cm); widest track, 4ft 9½in (146 cm). Overall length, 16ft 4½in (499 cm). Width, 6ft 1in (185.5 cm). Height, 5ft 2in (157.48 cm). Ground clearance, 7½in (19 cm).

Turning circle, 36ft (1,097 cm). Weight (approx.), 3,696 lb (1,677 kg).

Tank capacity, 17 Imperial gallons (77.5 litres). Tyre size, 6.70-16in. Battery, 12-volt, 64 amp-hour.

Saloon £1,088

XK120: 6 cyl., 83 x 106 mm (3.267 x 4.173 in). 3,442 c.c. (210 cu in); twin o.h.c.; compression ratio, 7 to 1 (optional, 8 to 1); 160 b.h.p. at 5,200 r.p.m.; 4 speeds, synchromesh (overall ratios, 3.84, 4.98, 7.22 and 12.29 to 1, or 3.27, 4.47, 6.48 and 11.04 to 1); central control.

Suspension, independent front, torsion bar; j-elliptic rear. Brakes, Lockheed hydraulic, two-leading shoe.

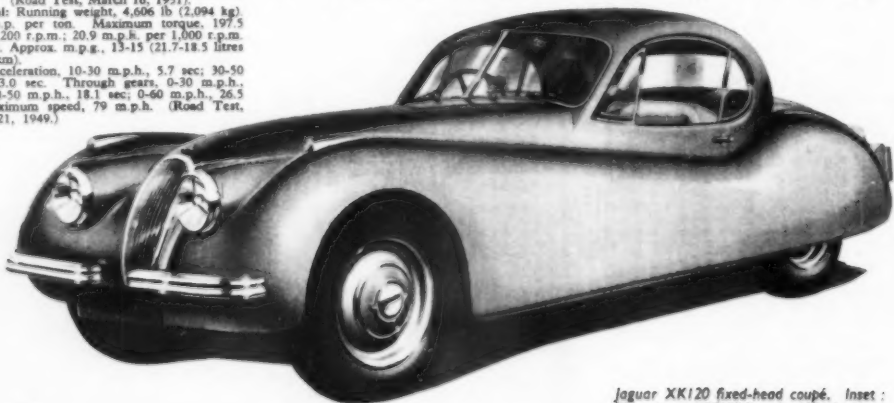
Wheelbase, 8ft 6in (259 cm); widest track, 4ft 3in (129.5 cm). Overall length, 14ft 5in (439.4 cm). Width, 5ft 2in (157.5 cm). Height, 4ft 1½in (125.1 cm). Ground clearance, 7½in (18.1 cm).

Turning circle, 31ft (945 cm). Weight (approx.), Super Sports, 2,744 lb (1,245 kg); Fixed-head coupé, 2,856 lb (1,296 kg).

Tank capacity, 15 Imperial gallons (68 litres); optional, 24 gallons (109 litres). Tyre size, 6.00-16in. Battery, 12-volt, 64 amp-hour.

Super Sports 2-seater £1,078

Fixed-head coupé £1,088



Jaguar XK120 fixed-head coupé. Inset: The winning XK120C in the 1951 Le Mans 24-hour race, France.





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Manufacturers of Land-Rovers
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FROM THE SIMPLE DIGNITY of the modified radiator and lamp treatment to the separate lock-up compartment now provided for the spare wheel, giving an unobstructed floor to the very large boot, the 1952 version of the Rover Seventy-Five reflects a steady advance in the quality of design and finish which has for so many years been the hallmark of a Rover car.



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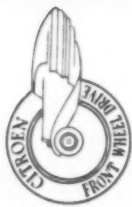
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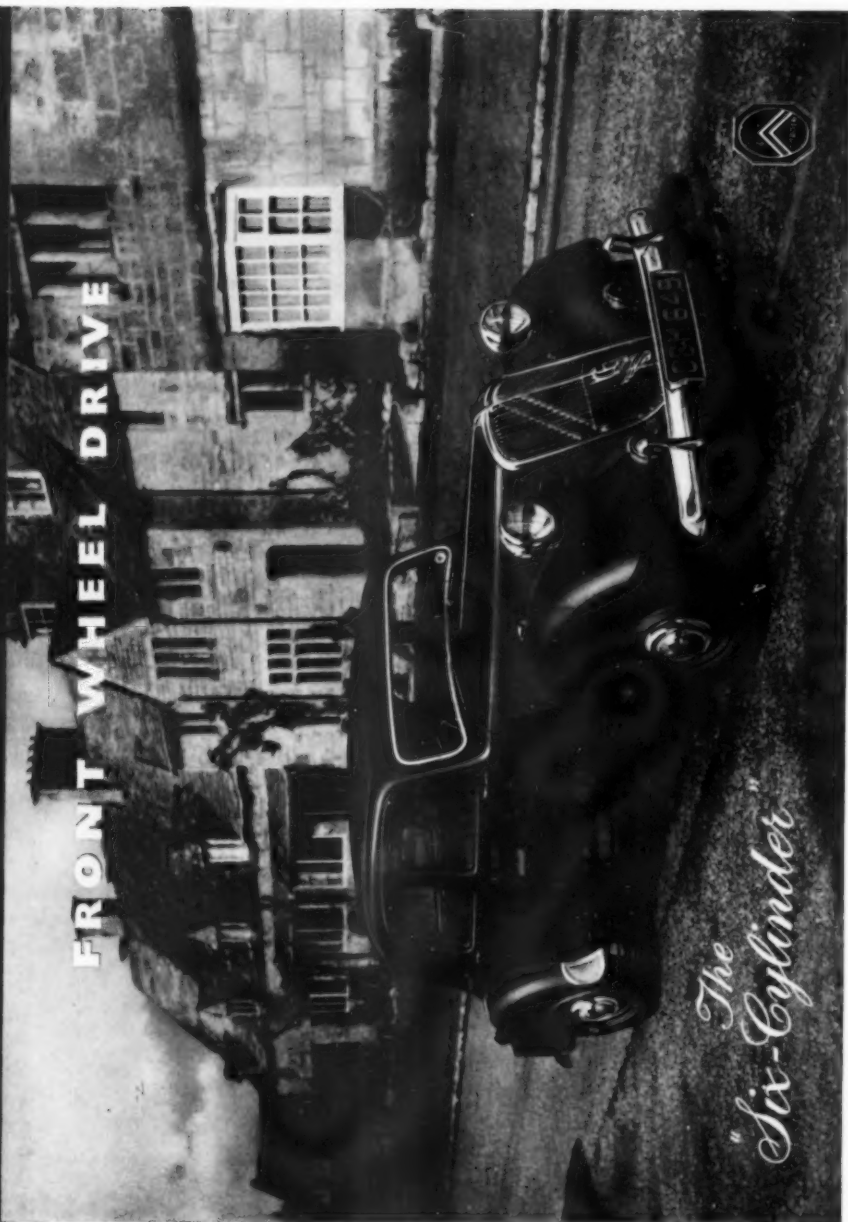
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ROAD TEST SUMMARY

XX120 Super Sports: Running weight, 2,919 lb (1,327 kg), 122.78 b.h.p. per ton. Maximum torque, 195 lb ft at 2,500 r.p.m.; 22 m.p.h. per 1,000 r.p.m. (top gear). Approx. m.p.g., 13-17 (21.7-16.6 litres per 100 km).
 Best acceleration, 10-30 m.p.h., 2.9 sec; 30-50 m.p.h., 7.8 sec. Through gears, 0-30 m.p.h., 4.0 sec; 0-50 m.p.h., 8.3 sec; 0-60 m.p.h., 12.0 sec; 0-70 m.p.h., 15.5 sec. Maximum speed, (within distance available), 115 m.p.h. (Road Test April 14, 1950.)

Jensen

Jensen Motors, Ltd., Carters Green, West Bromwich, Staffs.

THE Jensen company, which has done important pioneer work in the production of lightweight trucks and motor coaches, also builds a limited number of high-grade fast cars which come into the exclusive 100 m.p.h.-plus category. The Interceptor is a convertible with an exceptionally wide rear window providing an unusual range of vision, while the 4-litre is one of the few British examples

(477 cm). Width, 5ft 6in (167 cm). Height, 4ft 10in (147 cm). Ground clearance, 7in (17.8 cm). Turning circle, 38ft (1,173 cm). Weight (approx.), 3,080 lb (1,397 kg).
 Tank capacity, 13 Imperial gallons (59 litres). Tyre size, 6.00-16in. Battery, 12-volt, 68 amp-hour.

Cabriolet £1,700
 Saloon £1,700

PWA 4-Litre: Specification as for Interceptor, except for: gear ratios, 3.77, 5.39, 8.75 and 12.7 to 1.

Suspension, independent front, coil springs; coil rear.

Wheelbase, 10ft 7½in (323 cm); widest track, 4ft 11in (149 cm). Overall length, 16ft 5in (499 cm). Width, 5ft 10in (177 cm). Height, 5ft 4in (163 cm). Ground clearance, 8½in (21.6 cm). Turning circle, 32ft (972 cm). Weight (approx.), 3,560 lb (1,613 kg).
 Tank capacity, 19 Imperial gallons (86.4 litres). Tyre size, 6.50-16in. Battery, two 6-volt, 68 amp-hour.

Saloon £2,076

ROAD TEST SUMMARY

Interceptor: Running weight, 3,304 lb (1,502 kg), 89.1 b.h.p. per ton. Maximum torque, 212 lb ft at 2,200 r.p.m.; 24 m.p.h. per 1,000 r.p.m. (top gear). Approx. m.p.g., 20-24 (14.1-11.8 litres per 100 km).
 Best acceleration, 10-30 m.p.h., 3.8 sec; 30-50

The chassis is now being used as the basis for sports coupés and convertibles by Europe's leading coachbuilders.

The Javelin is trimmed in leather, with facia in walnut and maple wood, but the Jupiter has leather seats and a metal facia more appropriate to a car which is often used in competitions.

Javelin: 4 cyl, 72.5 x 90 mm (2.85 x 3.54in), 1,486 c.c. (90.9 cu in); o.h.v.; compression ratio, 7.1 to 1; 13 b.h.p. at 4,500 r.p.m., 4 speeds, synchromesh (overall ratios, 4.875, 6.7, 10.6 and 17.4 to 1); steering column control.

Suspension, independent front, torsion bar; torsion bar rear. Brakes, Girling hydraulic.

Wheelbase, 8ft 6in (259.04 cm); widest track, 4ft 3in (129.54 cm). Overall length, 14ft (426.7 cm). Width, 5ft 1in (155 cm). Height, 5ft 2½in (158.8 cm). Ground clearance, 7in (17.8 cm). Turning circle, 32ft (975 cm). Weight (approx.), 2,168 lb (983 kg).

Tank capacity, 8 Imperial gallons (36 litres). Tyre size, 5.25-16in. Battery, 12-volt, 60 amp-hour.

Saloon £725

Saloon de luxe £810

Jupiter: 4 cyl, 72.5 x 90 mm (2.85 x 3.54in), 1,486 c.c. (90.9 cu in); o.h.v.; compression ratio, 7.6 or 8 to 1; 62.5 b.h.p. at 4,500 r.p.m.



Jensen Interceptor drop-head coupé.

of the "hardtop coupé." The engine is a relatively large overhead-valve six of four litres, which gives the car a quiet, effortless performance. It is made by the Austin company and Jensen owners therefore have the benefit of a worldwide spares and service network.

Jensen cars have a characteristic modern appearance, with a smooth shape which contributes to their high performance. Equipment includes a comprehensive heating and ventilation system and an unusual feature is a built-in electric plug which can be connected to the mains to warm the engine on winter nights.

An axle ratio giving a low reduction of 3.28 to 1 enables the car to cruise without effort at 80-85 m.p.h., and fuel consumption is quite low, reaching 24 miles per Imperial gallon even when averaging more than 50 m.p.h.

Interceptor: 6 cyl, 87 x 111 mm (3.42 x 4.37in), 3,993 c.c. (243 cu in); o.h.v.; compression ratio, 6.8 to 1; 130 b.h.p. at 4,000 r.p.m., 4 speeds, synchromesh (overall ratios, 3.28, 4.68, 7.61 and 11.1 to 1); central control.

Suspension, independent front, coil springs; 1-elliptic rear. Brakes, Girling hydraulic, two-leading shoe.

Wheelbase, 9ft 4½in (284 cm); widest track, 4ft 9½in (144 cm). Overall length, 15ft 8in

m.p.h., 8.7 sec. Through gears, 0-30 m.p.h., 4.5 sec; 0-50 m.p.h., 10.6 sec; 0-60 m.p.h., 13.7 sec; 0-70 m.p.h., 20.9 sec. Maximum speed, 102 m.p.h. (Road Test, September 7, 1951).

Jowett

Jowett Cars, Ltd., 48, Albemarle Street, London, W.1.

FIFTY years of experience in building sturdy and economical cars have contributed to the evolution of the Jowett Javelin saloon, a smart unit-construction four-seater which is one of the outstanding performers available in the 1,500 c.c. category. With torsion bar suspension, it has exceptionally good road holding and its flat-four engine is the only one of this type built in Britain. Among the features which marked this as a car designed to stand up to hard work are the oil cooler in front of the radiator and the big carburetor air cleaner built into the bonnet.

The Jupiter sports convertible has a specially tuned high-compression version of the overhead-valve Javelin engine in a light tubular chassis. It has already won its class once in the Monte Carlo Rally and twice in the 24-hour race at Le Mans.

4 speeds, synchromesh (overall ratios, 4.56, 6.25, 9.9 and 16.25 to 1); steering column control.

Suspension, independent front, torsion bar; torsion bar rear. Brakes, Girling hydraulic.

Wheelbase, 7ft 9in (231.5 cm); widest track, 4ft 4in (132 cm). Overall length, 14ft (427 cm). Width, 5ft 2in (157.48 cm). Ground clearance, 8in (20.32 cm). Weight (approx.), 1,895 lb (860 kg).

Tank capacity, 10 Imperial gallons (45.46 litres). Tyre size, 5.50-16in. Battery, 12-volt, 50 amp-hour.

Chassis £540

Convertible 2-3-seater £575

ROAD TEST SUMMARY

Javelin de luxe: Running weight, 2,280 lb (1,036 kg), 51.6 b.h.p. per ton. Maximum torque, 76 lb ft at 2,600 r.p.m.; 15.5 m.p.h. per 1,000 r.p.m. (top gear). Approx. m.p.g., 25-29 (11.3-9.7 litres per 100 km).

Best acceleration, 10-30 m.p.h., 5.3 sec; 30-50 m.p.h., 12.7 sec; 40-60 m.p.h., 15.4 sec.

Through gears, 0-30 m.p.h., 5.4 sec; 0-50 m.p.h., 14.8 sec; 0-60 m.p.h., 22.4 sec; 0-70 m.p.h., 39.4 sec. Maximum speed, 80 m.p.h. (Road Test, June 29, 1951).

Jupiter: Running weight, 2,107 lb (958 kg), 63.79 b.h.p. per ton. Maximum torque, 82 lb ft at 3,100 r.p.m.; 17 m.p.h. per 1,000 r.p.m. (top gear). Approx. m.p.g., 27-30 (10.5-9.4 litres per 100 km).

Best acceleration, 10-30 m.p.h., 5.5 sec; 30-50 m.p.h., 10.4 sec. Through gears, 0-30 m.p.h., 5.7 sec; 0-50 m.p.h., 13.1 sec; 0-60 m.p.h., 20.4 sec; 0-70 m.p.h., 30.3 sec. Maximum speed, 90 m.p.h. (Road Test, December 1, 1950).



Marauder three-seater drop-head coupé.



Leo-Francis saloon.

BRITISH CARS FOR THE WORLD . . .

Lanchester de ville coupé.



Lagonda

Lagonda, Ltd., Hanworth Park Works,
Feltham, Middlesex.

THE Lagonda company has a history extending back to 1898 and it has long been famous for high-performance sporting cars with individual mechanical features. The company has been incorporated in the David Brown group since 1948. Engines are made in Yorkshire and the cars are assembled at the factory in Feltham, near London, which also produces the Aston Martin cars.

The Lagonda employs a six-cylinder engine with twin overhead camshafts, which is basically the same as that used in the Aston Martin, but the chassis is entirely different, consisting of a pure cruciform structure. The front suspension is by coil springs with widely based lower wishbones and this is the only British design at present in production using independent rear suspension. Torsion bars are the suspension medium. Transmission is through a four-speed synchromesh gear box with steering column change.

The saloon and convertible coachwork, which is built by Lagonda themselves, has elegant modern lines and is extremely well finished.

24-Litres: 6 cyl., 78 x 90 mm (3.07 x 3.54 in), 2,580 c.c. (157.5 cu in); twin o.h.c.; compression ratio, 6.5 to 1; 105 b.h.p. at 5,000 r.p.m. 4 speeds, synchromesh (overall ratios, 4.56, 6.06, 9.02 and 13.3 to 1); steering column control.

Suspension, independent front and rear; coil springs front; torsion bar rear. Brakes, Lockheed hydraulic.

Wheelbase, 9ft 5½ in (288.3 cm); widest track, 4ft 8½ in (144.15 cm). Overall length, 15ft 8 in (477.5 cm). Width, 5ft 8 in (172.7 cm). Height, 5ft 4 in (163 cm). Ground clearance, 7 in (17.8 cm). Turning circle, 38ft (11.58.2 cm). Weight (approx.), 3,248 lb (1,473 kg).

Tank capacity, 19 Imperial gallons (86.37 litres). Tyre size, 6.00-16 in. Battery, 12-volt, 83 amp-hour.

Chassis	£1,150
Saloon	£2,250
Drop-head coupé	£2,325

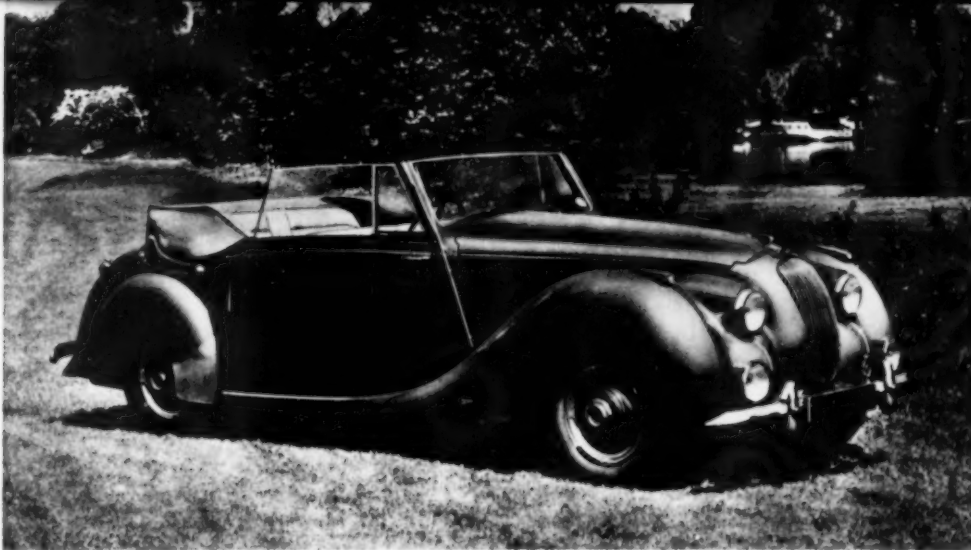
ROAD TEST SUMMARY

Saloon: Running weight, 3,346 lb (1,521 kg). 70.29 b.h.p. per ton. Maximum torque, 125 lb ft at 3,000 r.p.m.; 17.5 m.p.h. per 1,000 r.p.m. (top gear). Approx. m.p.g., 18-20 (15.7-14.1 litres per 100 km).

Best acceleration, 10-30 m.p.h., 4.2 sec; 30-50 m.p.h., 11.6 sec. Through gears, 0-30 m.p.h., 5.6 sec; 0-50 m.p.h., 12.3 sec; 0-60 m.p.h., 18.2 sec. Maximum speed, 91 m.p.h. (Road Test, November 11, 1949.)

D.H. Coupé: Running weight, 3,409 lb (1,549.3 kg). 67.34 b.h.p. per ton. Maximum torque, 133 lb ft at 3,000 r.p.m.; 18 m.p.h. per 1,000 r.p.m. (top gear). Approx. m.p.g., 18-20 (13.7-14.1 litres per 100 km).

Best acceleration, 10-30 m.p.h., 4.3 sec; 30-50 m.p.h., 12.8 sec. Through gears, 0-30 m.p.h., 5.8 sec; 0-50 m.p.h., 12.7 sec; 0-60 m.p.h., 18.8 sec; 0-70 m.p.h., 26.6 sec. Maximum speed, 84 m.p.h. (Road Test, March 2, 1951.)



2-litre Lagonda drop-head coupé.

Lanchester

Lanchester Motor Co., Ltd., Radford Works, Coventry.

THE first petrol driven four-wheel car made in England was a Lanchester, built in 1895. Dr. F. W. Lanchester was responsible for the early development of worm drive, magneto ignition and epicyclic gears, forerunners of present-day automatic transmissions.

The Lanchester company is now a member of the Daimler group and production is concentrated on the Fourteen, a 2-litre quality car designed for export markets and planned for production in greater numbers than any previous Lanchester model. There are two body styles, a saloon and a convertible. The latter has a three-position hood which is folded manually to the de ville position, after which it can be furled or re-erected hydraulically by pressing a button. Interiors are luxuriously finished in traditional British style with upholstery in high-grade leather.

An unusual feature is the use of laminated torsion bars for the front suspension and there is an automatic chassis lubrication system controlled by fluctuations in engine heat. The transmission is through a fluid coupling and four-speed epicyclic gear box.

Fourteen: 4 cyl., 76.2x107.9 mm (3.00x4.25in), 1,968 c.c. (120 cu in); o.h.v.; compression ratio, 6.7 to 1; 60 b.h.p. at 4,200 r.p.m. 4 speeds, synchromesh (overall ratios, 4.55, 6.71, 10.55 and 17.45 to 1); steering column control.

Suspension, independent front, torsion bar; j-elliptic rear. Brakes, Girling hydro-mechanical. Wheelbase, 8ft 8in (264 cm); widest track, 4ft 4in (132 cm). Overall length, 14ft 8in (447 cm). Width, 5ft 5in (166.4 cm). Ground clearance, 6in (16.51 cm). Turning circle, 33ft (10.21 m). Weight (approx.), 3,100 lb (1,409 kg).

Tank capacity, 15 Imperial gallons (68 litres). Tyre size, 6.70-15in. Battery, 12-volt, 60 amp-hour.

Saloon £985
Coupé £1,050

Lea-Francis

Lea-Francis Cars, Ltd., Much Park Street, Coventry.

THE old-established Lea-Francis company, which began operations in 1896, has always concentrated on high-performance cars with individual mechanical features. Their current models all have four-cylinder engines with hemi-

spherical combustion chambers, the outstanding unit being the sports engine which gives 100 b.h.p. from a swept volume of 2½ litres. This is fitted in an open sports model which has two small occasional seats behind the main front seats.

Chassis features include torsion bar front suspension and Girling hydro-mechanical brakes. The gear change is by the fast-disappearing central lever, as befits a car of sporting character. The chassis frame is underslung at the rear.

In appearance, Lea-Francis cars are easily identified by the characteristic radiator grille, which is now rounded in outline to harmonize with modern coachwork, but still retains the essential features of the famous Lea-Francis models of pre-war days.

14 h.p.: 4 cyl., 75x100 mm (2.95x3.93in), 1,767 c.c. (108 cu in); o.h.v.; compression ratio, 7.25 to 1; 65 b.h.p. at 4,700 r.p.m. 4 speeds, synchromesh (overall ratios, 4.84, 6.9, 10.4 and 17.2 to 1); central control.

Suspension, independent front, torsion bar; j-elliptic rear. Brakes, Girling hydraulic.

Wheelbase, 8ft 3in (289.8 cm); widest track, 4ft 4in (132.09 cm). Overall length, 15ft 1in (457.2 cm). Width, 5ft 4in (162 cm). Height, 5ft 0in (152.4 cm). Ground clearance, 7in (17.78 cm). Turning circle, 32ft (9.75 m). Weight (approx.), Saloon, 2,910 lb (1,320 kg); Estate car, 3,020 lb (1,369 kg).

Tank capacity, 11 Imperial gallons (50 litres). Tyre size, 5.50-17in. Battery, 12-volt, 64 amp-hour.

Saloon £1,240
Estate car £1,210

18 h.p.: 4 cyl., 85x110 mm (3.35x4.33in), 2,490 c.c. (153.5 cu in); o.h.v.; compression ratio, 6 to 1; 95 b.h.p. at 4,000 r.p.m. 4 speeds, synchromesh (overall ratios, 3.916, 5.55, 8.36 and 13.86 to 1); central control.

Suspension, independent front, torsion bar; j-elliptic rear. Brakes, Girling hydraulic.

Wheelbase, 8ft 3in (289.8 cm); widest track, 4ft 4in (132.09 cm). Overall length, 15ft 1in (457.2 cm). Width, 5ft 4in (162 cm). Height, 5ft 0in (152.4 cm). Ground clearance, 7in (17.78 cm). Turning circle, 32ft (9.75 m). Weight (approx.), 3,320 lb (1,509 kg).

Tank capacity, 13 Imperial gallons (58 litres). Tyre size, 6.00-16in. Battery, 12-volt, 64 amp-hour.

Saloon, 6-light £1,520

24-Litre Sports: 4 cyl., 85x110 mm (3.35x4.33in), 2,490 c.c. (153.5 cu in); o.h.v.; compression ratio, 7 to 1; 100 b.h.p. at 4,000 r.p.m. 4 speeds, synchromesh (overall ratios, 3.64, 5.16, 7.77 and 12.89 to 1); central control.

Suspension, independent front, torsion bar; j-elliptic rear. Brakes, Girling hydraulic.

Wheelbase, 8ft 3in (289.8 cm); widest track, 4ft 4in (132.09 cm). Overall length, 14ft 4in (429.6 cm). Width, 5ft 3in (160 cm). Height, 4ft 6in (137.16 cm). Ground clearance, 7in (17.78 cm). Turning circle, 30ft (9.14 m). Weight (approx.), 2,570 lb (1,165 kg).

Tank capacity, 15 Imperial gallons (68 litres). Tyre size, 6.00-16in. Battery, 12-volt, 64 amp-hour.

Sports 2-seater £1,254

Marauder

Marauder Car Co., Ltd., Common Lane, Kenilworth, Warwickshire.

THE first Marauder car was built two years ago by a group of three enthusiasts who used Rover engine, transmissions, chassis and suspension parts in a new sports chassis. A company was formed and the cars have since been made in limited numbers, first with the normal Rover 75 engine of 2,103 c.c. and more recently with an enlarged engine of 2,367 c.c., which delivers 105 b.h.p. The open sports coachwork, which has clean modern lines, utilizes some of the Rover body pressings.

The use of an overdrive in the transmission makes an important contribution to low fuel consumption and effortless high speed cruising. It is engaged and released by rotating a small hand wheel on the instrument panel. The coachwork, being of the modern flush-sided type, allows room for three people abreast, and well-planned side screens ensure comfort in bad weather. The hood folds completely into the tail when not in use and there is room for a fair amount of luggage in a locker in the tail.

Sports: 6 cyl., 65.2x105 mm (2.567x4.134 in), 2,103 c.c. (128.4 cu in); o.h.v.; compression ratio, 7.6 to 1; 80 b.h.p. at 4,200 r.p.m. 4 speeds, synchromesh (overall ratios, 4.3, 5.92, 8.77 and 14.5 to 1); central control.

Suspension, independent front, coil springs; j-elliptic rear. Brakes, Girling hydraulic, two-lead shoe.

Wheelbase, 8ft 6in (259 cm); widest track, 4ft 4in (132 cm). Overall length, 13ft 10in (422 cm). Width, 5ft 6in (168 cm). Height (hood down), 4ft 4in (132 cm). Ground clearance, 6in (16.51 cm). Turning circle, 37ft (11.25 m). Weight (approx.), 2,575 lb (1,168 kg).

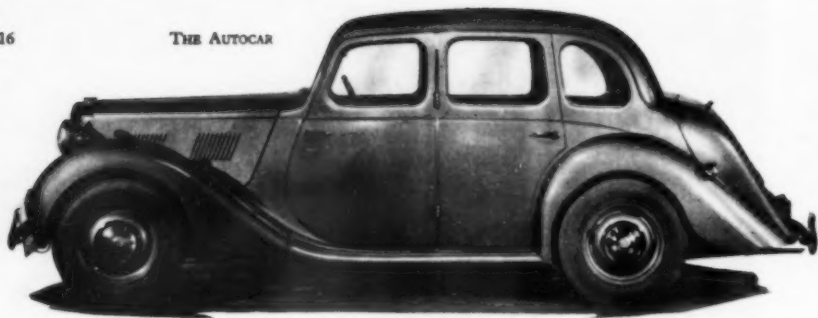
Tank capacity, 11½ Imperial gallons (52 litres). Tyre size, 6.00-15in. Battery, 12-volt, 51 amp-hour.

Three-seater £1,250

ROAD TEST SUMMARY

Running weight, 2,884 lb (1,311 kg). 62.1 b.h.p. per ton. Maximum torque, 110 lb ft at 2,500 r.p.m.; 18 m.p.h. per 1,000 r.p.m. (top gear). Approx. m.p.g., 23-25 (12.3-11.3 litres per 100 km).

Best acceleration, 10-30 m.p.h., 5.4 sec; 30-50 m.p.h., 11.2 sec. Through gears, 0-30 m.p.h., 5.7 sec; 0-50 m.p.h., 13.2 sec; 0-60 m.p.h., 18.4 sec; 0-70 m.p.h., 27.0 sec. Maximum speed, 89 m.p.h. (Road Test, June 22, 1951).



1½-litre M.G. saloon. Inset: A TD Midget after establishing 23 records at Utah, U.S.A. It averaged over 75 m.p.h. for 12 hours.

BRITISH CARS FOR THE WORLD

M.G.

M.G. Car Co., Ltd., Abingdon-on-Thames, Berkshire.

SINCE Morris Garages of Oxford first produced a specially tuned version of the Morris Oxford in 1923, a long line of M.G. sports cars has gained fame all over the world. Current production is concentrated on the famous TD Midget and the 1½-litre saloon. The Midget roadster is to be seen wherever sports car enthusiasts gather together, and owners who wish to use it in competitions have the benefit of a carefully planned series of tuning schedules by which the power output can be increased from the 54 horse power of the standard model up to nearly 100 b.h.p. running on a 12 to 1 compression ratio. The use of the standard TD crankshaft and connecting rods in the supercharged engine with which Goldie Gardner established new world records emphasizes the essentially robust construction of the engine.

The latest version of the 1½-litre saloon is the YB series, which has a hypoid axle and front brakes with two leading shoes. A larger clutch is fitted and the front suspension now has an anti-roll bar. The interior is finished in leather, with a fascia of walnut veneer.

TD Midget: 4 cyl., 66.5 x 90 mm (2.618 x 3.543 in.), 1,250 c.c. (76.25 cu in.); o.h.v.; compression ratio, 7.25 to 1; 54 b.h.p. at 5,200 r.p.m. 4 speeds, synchromesh (overall ratios, 5.125, 7.098, 10.609 and 17.938 to 1); central control.

Suspension, independent front, coil springs; 4-elliptic rear. Brakes, Lockheed hydraulic, front two-leading shoe.

Wheelbase, 7ft 10in (238.8 cm); widest track, 4ft 2in (127 cm). Overall length, 12ft 1in (367.3 cm). Width, 4ft 10in (149 cm). Height, 4ft 2in (127 cm). Ground clearance, 6in (15 cm). Turning circle, 31ft (9.53 m). Weight (approx.), 2,034 lb (914.5 kg).

Tank capacity, 12½ Imperial gallons (56 litres).

Morgan Plus Four coupé.

Tyre size, 5.50-15in. Battery, 12-volt, 51 amp-hour.

TD 2-seater £530
Mark II 2-seater £585

1½-Litre, Series YB: 4 cyl., 66.5 x 90 mm (2.618 x 3.543 in.), 1,250 c.c. (76.25 cu in.); o.h.v.; compression ratio, 7.25 to 1; 46 b.h.p. at 4,800 r.p.m. 4 speeds, synchromesh (overall ratios, 5.143, 7.121, 10.646 and 18.0 to 1); central control.

Suspension, independent front, coil springs; 4-elliptic rear. Brakes, Lockheed hydraulic.

Wheelbase, 8ft 3in (251.4 cm); widest track, 4ft 2in (127 cm). Overall length, 13ft 5in (409 cm). Width, 4ft 11in (149 cm). Height, 4ft 10in (147 cm). Ground clearance, 6in (15 cm). Turning circle, 35ft (10.67 m). Weight (approx.), 2,184 lb (991 kg).

Tank capacity, 8 Imperial gallons (36 litres). Tyre size, 5.25-16in. Battery, 12-volt, 51 amp-hour.

Saloon £635

ROAD TEST SUMMARY

TD Midget: Running weight, 2,009 lb (913 kg). 60.66 b.h.p. per ton. Maximum torque, 63.9 lb ft at 2,600 r.p.m.; 14.4 m.p.h. per 1,000 r.p.m. (top gear). Approx. m.p.g., 27-33 (10.5-8.6 litres per 100 km).

Best acceleration, 10-30 m.p.h., 5.5 sec; 30-50 m.p.h., 12.9 sec. Through gears, 0-30 m.p.h., 6.2 sec; 0-50 m.p.h., 15.3 sec; 0-60 m.p.h., 23.5 sec; 0-70 m.p.h., 44.4 sec. Maximum speed, 80-83 m.p.h. (Road Test, January 20, 1950).

1½-Litre: Running weight, 2,341 lb (1,064 kg). 37.5 b.h.p. per ton. Maximum torque, 58.5 lb ft at 2,400 r.p.m.; 14.42 m.p.h. per 1,000 r.p.m. (top gear). Approx. m.p.g., 24-28 (11.8-10.1 litres per 100 km).

Best acceleration, 10-30 m.p.h., 7.1 sec; 30-50 m.p.h., 11.8 sec. Through gears, 0-30 m.p.h., 6.9 sec; 0-50 m.p.h., 18.4 sec; 0-60 m.p.h., 30.4 sec. Maximum speed, 75 m.p.h. (Road Test, April 11, 1952).

Morgan

Morgan Motor Co., Ltd., Pickersleigh Road, Malvern Link, Worcs.

THE Morgan Company has a long history extending back to 1909, when H. F. S. Morgan built his first three-wheeled single-seater runabout. It was

fitted with the simple slide and pillar front suspension which, in principle, has been used basically unchanged to the present day. Morgan is one of the only two manufacturers in the world using this type; significantly, both are manufacturers of sports cars.

The latest Morgan, the Plus Four, powered by a Standard Vanguard engine, has had a great reception and the chief trouble is that the demand far exceeds the total output of the small works in the Malvern Hills. The transmission is through a separately mounted four-speed gear box and a feature of the chassis is the method of lubricating the front suspension by oil supplied under pressure from the engine. The frame has side members of Z section and passes under the axle at the rear, giving a very low floor level. Body styles comprise a sports two-seater, open four-seater and convertible coupé.

Plus Four: 4 cyl., 85 x 92 mm (3.347 x 3.622 in.), 2,088 c.c. (127.6 cu in.); o.h.v.; compression ratio, 6.7 to 1; 68 b.h.p. at 4,200 r.p.m. 4 speeds, synchromesh (overall ratios, 4.1, 5.6, 12.0 and 13.8 to 1); central control.

Suspension, independent front, coil springs; 4-elliptic rear. Brakes, Girling hydraulic, two-leading shoe.

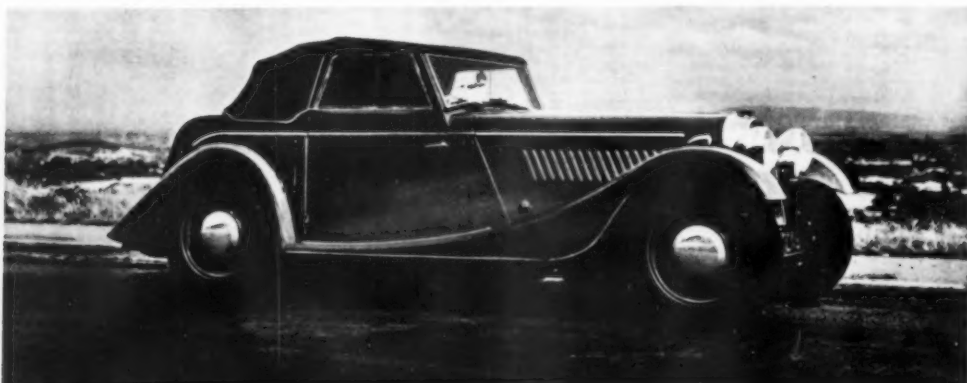
Wheelbase, 8ft (244 cm); widest track, 3ft 11in (119.4 cm). Overall length, 2-seater, 11ft 8in (355 cm); 4-seater and coupé, 11ft 10in (360 cm). Width, 4ft 8in (142 cm). Height, 4ft 4in (133 cm). Ground clearance, 6in (15 cm). Turning circle, 33ft (10.06 m). Weight (approx.), 2-seater, 1,764 lb (800 kg); 4-seater, 1,792 lb (813 kg); coupé, 1,848 lb (838 kg).

Tank capacity, 2-seater, 11 Imperial gallons (50 litres); 4-seater, 10 gallons (45.5 litres). Tyre size, 5.25-16in. Battery, 12-volt, 57 amp-hour.

Two-seater £535
Four-seater £550
Drop-head coupé £590

ROAD TEST SUMMARY

Coupé: Running weight, 1,904 lb (865.4 kg). 80 b.h.p. per ton. Maximum torque, 112 lb ft at 2,500 r.p.m.; 19 m.p.h. per 1,000 r.p.m. (top





*The 14 h.p.
Four-Light Saloon*



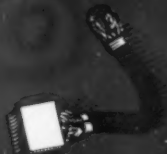
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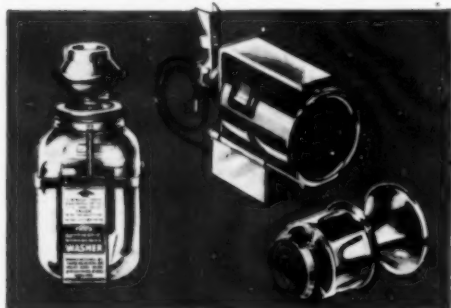
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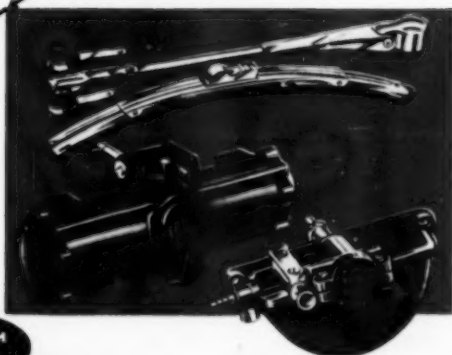
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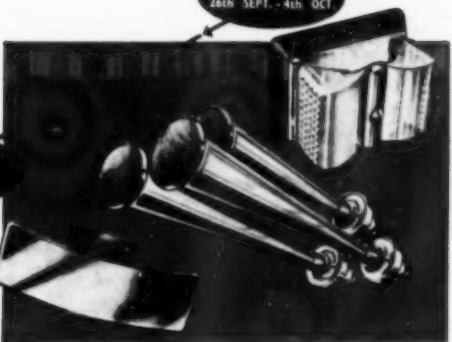
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BIRMINGHAM
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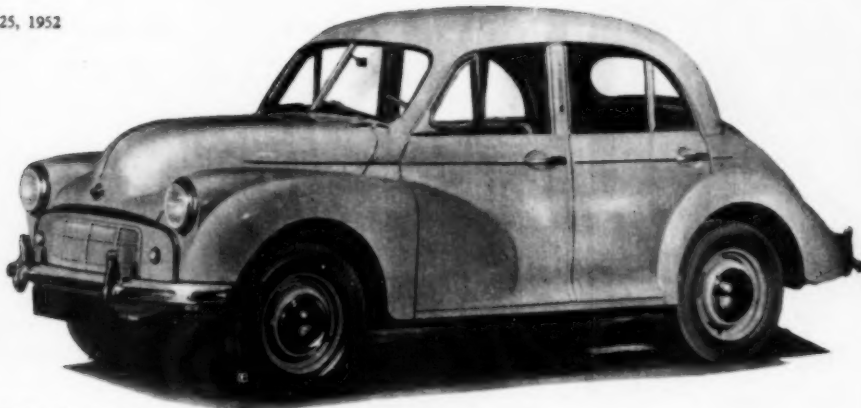
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SOLE AGENTS FOR THE UNITED KINGDOM

SOLE AGENTS FOR THE UNITED KINGDOM



Morris Minor four-door saloon.

gear). Approx. m.p.g., 22-26 (12.8-10.9 litres per 100 km).

Best acceleration, 10-30 m.p.h., 4.4 sec; 30-50 m.p.h., 9.5 sec. Through gears, 0-30 m.p.h., 4.6 sec; 0-50 m.p.h., 11.3 sec; 0-60 m.p.h., 17.9 sec; 0-70 m.p.h., 28 sec. Maximum speed, 83.5 m.p.h. (Road Test, April 27, 1951).

Morris

Morris Motors, Ltd., Cowley, Oxford.

THE making of the first Morris Oxford car at Cowley in 1912 was the first item in the long success story which led to the building up of the great Nuffield organization, which has now been amalgamated with Austin to form the biggest motor vehicle producing group outside the U.S.A.

The smallest Morris car, the famous Minor, is Britain's most successful post-war small car and has gained a great reputation for comfortable riding, good roadholding and operating economy. It has undergone a continual process of detail refinement and improvement since its introduction.

The Oxford, with its four-cylinder side-valve engine, is a robust five-seater family car exported in considerable numbers to many parts of the world, while the Morris Six has coachwork of larger size than the Oxford and is powered by an overhead camshaft six-cylinder engine delivering 70 b.h.p., which gives it a surprisingly lively performance.

All Morris cars have independent front suspension by torsion bars and conventional transmissions, with synchromesh gear boxes. They have unit body-chassis structures which provide the necessary rigidity without excessive weight.

Minor: 4 cyl., 57 x 90 mm (2.244 x 3.543 in), 918.6 c.c. (56 cu in); side valves; compression ratio, 6.6 to 1; 27.5 b.h.p. at 4,400 r.p.m.

4 speeds, synchromesh (overall ratios, 4.55, 7.015, 10.477 and 17.994 to 1); central control.

Suspension, independent front, torsion bar; 1-elliptic rear. Brakes, Lockheed hydraulic.

Wheelbase, 7ft 2in (218.3 cm); widest track, 4ft 2 1/2 in (128.4 cm). Overall length, 12ft 4in (376 cm). Width, 5ft 1in (155 cm). Height, 5ft 1 1/2 in (152 cm). Ground clearance, 6 1/2 in (17.1 cm). Turning circle, 35ft (10.74 cm). Weight (approx.), 2-door, 1,735 lb (787 kg); 4-door, 1,792 lb (813 kg); touring, 1,680 lb (762 kg).

Tank capacity, 5 Imperial gallons (22.7 litres).

Tyre size, 5.00-14in. Battery, 12-volt, 38 amp-hour.

Saloon, 2-door £373

Saloon, 4-door £405

Tourer £373

Oxford: 4 cyl., 73.5 x 87 mm (2.894 x 3.425 in), 1,477 c.c. (90 cu in); side valves; compression ratio, 6.6 to 1; 41 b.h.p. at 4,000 r.p.m.

4 speeds, synchromesh (overall ratios, 4.875, 7.342, 10.983 and 18.559 to 1); steering column control.

Suspension, independent front, torsion bar; 1-elliptic rear. Brakes, Lockheed hydraulic.

Wheelbase, 8ft 1in (244.4 cm); widest track, 4ft 5 1/2 in (135.9 cm). Overall length, 13ft 1 1/2 in (424 cm). Width, 5ft 5in (165 cm). Height, 5ft 3in (160 cm). Ground clearance, 6 1/2 in (17.1 cm). Turning circle, 36ft (10.97 cm). Weight (approx.), 2,296 lb (1,042 kg).

Tank capacity, 9 Imperial gallons (41 litres).

Tyre size, 5.50-15in. Battery, 12-volt, 51 amp-hour.

Saloon, 4-door £510

Six: 6 cyl., 73.5 x 87 mm (2.894 x 3.425 in), 2,214 c.c. (135 cu in); o.h.c.; compression ratio, 6.6 to 1; 70 b.h.p. at 4,400 r.p.m.

4 speeds, synchromesh (overall ratios, 4.555, 6.586, 10.248 and 14.642 to 1); steering column control.

Suspension, independent front, torsion bar; 1-elliptic rear. Brakes, Lockheed hydraulic.

Wheelbase, 9ft 2in (279.4 cm); widest track, 4ft 6in (137.1 cm). Overall length, 14ft 5in (450 cm). Width, 5ft 6in (168 cm). Height, 5ft 3 1/2 in (161 cm). Ground clearance, 7in (17.78 cm). Weight (approx.), 2,800 lb (1,270 kg).

Tank capacity, 12 Imperial gallons (54 litres).

Tyre size, 6.00-15in. Battery, 12-volt, 51 amp-hour.

Saloon £640

ROAD TEST SUMMARY

Minor 4-door: Running weight, 1,729 lb (786 kg). 34.4 b.h.p. per ton. Maximum torque, 38.8 lb ft at 2,400 r.p.m.; 15 m.p.h. per 1,000 r.p.m. (top gear). Approx. m.p.g., 35-40 (8.1-7.1 litres per 100 km).

Rear-engined Renault 760 saloon.



Best acceleration, 10-30 m.p.h., 8.7 sec; 30-50 m.p.h., 36.8 sec. Through gears, 0-30 m.p.h., 9.8 sec; 0-50 m.p.h., 38.5 sec. Maximum speed, 61 m.p.h. (Road Test, May 4, 1951).

Oxford: Running weight, 2,388 lb (1,085 kg). 39.16 b.h.p. per ton. Maximum torque, 65 lb ft at 1,800 r.p.m.; 15 m.p.h. per 1,000 r.p.m. (top gear). Approx. m.p.g., 27-30 (10.5-9.4 litres per 100 km).

Best acceleration, 10-30 m.p.h., 7.8 sec; 30-50 m.p.h., 19.3 sec. Through gears, 0-30 m.p.h., 9.7 sec; 0-50 m.p.h., 27.4 sec; 0-60 m.p.h., 46.7 sec. Maximum speed, 67 m.p.h. (Road Test, August 25, 1950).

Six: Running weight, 2,760 lb (1,259 kg). 56.63 b.h.p. per ton. Maximum torque, 98 lb ft at 1,800 r.p.m.; 19 m.p.h. per 1,000 r.p.m. (top gear). Approx. m.p.g., 20-24 (14.1-11.8 litres per 100 km).

Best acceleration, 10-30 m.p.h., 6.1 sec; 30-50 m.p.h., 16.8 sec. Through gears, 0-30 m.p.h., 7.9 sec; 0-50 m.p.h., 18.6 sec; 0-60 m.p.h., 27.1 sec. Maximum speed, 75 m.p.h. (Road Test, April 28, 1950).

Renault

Renault, Ltd., Western Avenue, London, W.3.

RENAULT cars have been assembled in Britain since before the war, using parts imported from the French factory.

Since the war considerable numbers of the small 750 c.c. rear engine saloon have been assembled at the London factory on Western Avenue. A few have been released on the home market and the rest have gone overseas. The British version is fitted with British tyres, electrical equipment and accessories and the interior trim is modified in accordance with British ideas.

Apart from the saloon, a four-seater convertible is now being produced, but is reserved for export.

7.3 h.p. (rear engine), 4 cyl., 54.5 x 80 mm (2.15 x 3.15 in), 748 c.c. (45.63 cu in); o.h.v.; compression ratio, 7.25 to 1; 21 b.h.p. at 4,000 r.p.m. 3 speeds, synchromesh (overall ratios, 5.65, 8.72 and 17.4 to 1); central control.

Suspension, independent front and rear, coil springs. Brakes, Lockheed hydraulic.

Wheelbase, 6ft 1 1/2 in (210.84 cm); widest track, 3ft 1 1/2 in (119.38 cm). Overall length, 11ft 10in (360.7 cm). Width, 4ft 8 1/2 in (143.51 cm). Height, 4ft 8 1/2 in (143.51 cm). Ground clearance, 7in (17.78 cm). Weight (approx.), 1,291 lb (587 kg).

Tank capacity, 6 Imperial gallons (27.28 litres).

Tyre size, 5.20-15in. Battery, 6-volt, 100 amp-hour.

Saloon £430

Saloon de luxe £455

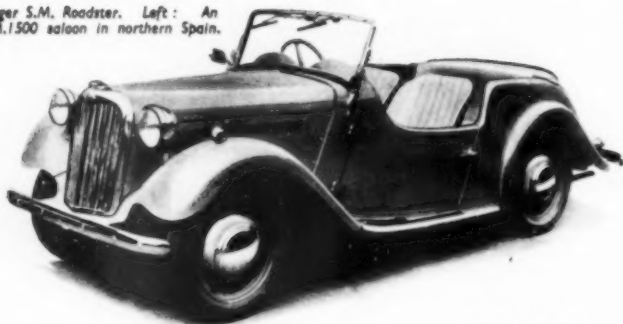
ROAD TEST SUMMARY

Running weight, 1,537 lb (698 kg). 31.83 b.h.p. per ton. Maximum torque, 32.8 lb ft at 1,800 r.p.m.; 13.5 m.p.h. per 1,000 r.p.m. (top gear). Approx. m.p.g., 40-46 (7.1-6.1 litres per 100 km).

Best acceleration, 10-30 m.p.h., 9.8 sec; 30-50 m.p.h., 38.9 sec. Through gears, 0-30 m.p.h., 12.2 sec; 0-50 m.p.h., 50.0 sec. Maximum speed, 55 m.p.h. (Road Test, February 10, 1950).

BRITISH CARS FOR THE

Singer S.M. Roadster. Left: An S.M.1500 saloon in northern Spain.



Rover 75 saloon.



Riley

Riley Motors, Ltd., Abingdon-on-Thames, Berkshire.

THIS is one of the oldest companies in the British industry. The Riley family started operations in 1896 and produced the first Riley car two years later. In 1938 the company was absorbed into the Nuffield group.

The current models, the 1½-litre and 2½-litre, were among the first post-war cars to go into production. They scored an immediate success and have continued without important changes. Their high efficiency four-cylinder engines are among the most successful examples of the hemispherical head principle and their torsion bar front suspension contributes to the excellent high-speed road holding for which they are noted. The coachwork is very well finished, with interior trim in high-grade leather and polished walnut.

Rileys exhibit unusual continuity in both appearance and design detail. The present engine layout derives directly from that of the Riley Nine, one of the most successful light cars ever built, and the current cars, although modern in form, are recognizable descendants of the great pre-war Rileys.

1½-litre: 4 cyl., 69×100 mm (2.72×3.937 in.), 1,466 c.c. (91.25 cu in.); o.h.v.; compression ratio, 6.8 to 1; 55 b.h.p. at 4,500 r.p.m.; 4 speeds, synchromesh (overall ratios, 4.89, 7.23, 11.2 and 19.4 to 1); central control.

Suspension, independent front, torsion bar; i-elliptic rear. Brakes, Girling hydro-mechanical. Wheelbase, 9ft 4½ in (285.8 cm); widest track, 4ft 4½ in (132.7 cm). Overall length, 14ft 11 in (454 cm). Width, 5ft 3½ in (161.3 cm). Height, 4ft 11 in (150 cm). Ground clearance, 7½ in (19 cm). Turning circle, 30ft (9.14 m). Weight (approx.), 2,716 lb (1,232 kg). Tank capacity, 12½ Imperial gallons (56.8 litres). Tyre size, 5.75-16in. Battery, 12-volt, 58 amp-hour.

Saloon £860
2½-litre: 4 cyl., 80.5×120 mm (3.169×4.724 in.), 2,443 c.c. (149 cu in.); o.h.v.; compression ratio, 6.8 to 1; 100 b.h.p. at 4,500 r.p.m.; 4 speeds, synchromesh (overall ratios, 4.11, 5.83, 8.86 and 15 to 1); central control.

Suspension, independent front, torsion bar; i-elliptic rear. Brakes, Girling hydro-mechanical, two-leading shoes. Wheelbase, 9ft 11 in (302 cm); widest track, 4ft 4½ in (132.7 cm). Overall length, 15ft 6 in (472 cm). Width, 5ft 3½ in (161.3 cm). Height, 4ft 11 in (151 cm). Ground clearance, 7 in (17.78 cm). Turning circle, 30ft (9.14 m). Weight (approx.), 3,220 lb (1,461 kg). Tank capacity, 12½ Imperial gallons (56.8 litres). Tyre size, 6.00-16in. Battery, 12-volt, 63 amp-hour.

Saloon £1,055

ROAD TEST SUMMARY

1½-litre: Running weight, 2,716 lb (1,232 kg). 45.4 b.h.p. per ton. Approx. m.p.g. 25-29 (11.3-9.7 litres per 100 km).

Best acceleration, 10-30 m.p.h., 6.4 sec; 30-50 m.p.h., 15.3 sec. Through gears, 0-30 m.p.h., 7.8 sec; 0-50 m.p.h., 19.0 sec; 0-60 m.p.h., 31.2 sec. Maximum speed, 74 m.p.h. (Road Test, October 10, 1947).

2½-litre: Running weight, 3,199 lb (1,454 kg). 70.05 b.h.p. per ton. Approx. m.p.g. 18-24 (15.7-11.8 litres per 100 km).

Best acceleration, 10-30 m.p.h., 5.4 sec; 30-50 m.p.h., 11.9 sec. Through gears, 0-30 m.p.h., 5.9 sec; 0-50 m.p.h., 13.0 sec; 0-60 m.p.h., 18.4 sec. Maximum speed, 92 m.p.h. (Road Test, February 25, 1949).

Rolls-Royce

Rolls-Royce, Ltd., 14-15, Conduit Street, London, W.1.

THE pre-eminent position of Rolls-Royce gas turbines in the aircraft world emphasizes that the company's leading position in the finest type of engineering is as secure as ever. The Rolls-Royce range of cars benefits from the company's vast engineering resources and maintains its position as the world's quality standard in automobile engineering. The enlarged engine of 4½ litres introduced last year has increased the performance and flexibility. It is of the F head type with overhead inlet valves and side exhaust valves. This engine is employed in two chassis, the Silver Wraith with a wheelbase of 10ft 7in and the smaller Silver Dawn with a 10ft wheelbase. Coachwork for the Silver Wraith is produced exclusively by specialist coachbuilders in accordance with long-

standing Rolls-Royce tradition, but the company produces its own saloon bodywork for the smaller Silver Dawn, which is reserved for export only. The Rolls-Royce chassis is notable for its remarkably rigid frame, the very carefully planned independent front suspension and the exceptionally fine quality of the detail work throughout. For many years the brakes have been servo assisted.

Silver Wraith: 6 cyl., 92×114 mm (3.622×4.50 in.), 4,566 c.c. (279 cu in.); o.h.v.; compression ratio, 6.4 to 1. 4 speeds, synchromesh (overall ratios, 3.7, 5.0, 7.5 and 11.1 to 1); right-hand control.

Suspension, independent front, coil spring; i-elliptic rear. Brakes, mechanical servo.

Wheelbase, 10ft 7in (322.58 cm); widest track, 5ft 1½ in (152 cm). Specialist coachwork only available. Tank capacity, 18 Imperial gallons (81.83 litres). Tyre size, 6.50-17in. Battery, 12-volt, 54 amp-hour.

Chassis £2,345
Park Ward 6-light saloon £4,445
Hooper touring limousine £4,490
Mulliner touring limousine £4,615
James Young sports saloon £4,620

Silver Dawn: Specification as for Silver Wraith, except for steering column control.

Wheelbase, 10ft (304.8 cm); widest track, 4ft 10½ in (148.59 cm). Overall length, 16ft (487.7 cm). Width, 5ft 11 in (180.34 cm). Height, 5ft 6 in (167 cm). Ground clearance, 7½ in (18.41 cm). Turning circle, 42½ ft (12.954 m). Tyre size, 6.50-16in.

Saloon £2,975

ROAD TEST SUMMARY

Sedans de ville: Running weight, 4,732 lb (2,151 kg). 23 m.p.h. per 1,000 r.p.m. (top gear). Approx. m.p.g. 15-17 (18.8-16.6 litres per 100 km).

Best acceleration, 10-30 m.p.h., 6.0 sec; 30-50 m.p.h., 13.0 sec. Through gears, 0-30 m.p.h., 7.9 sec; 0-50 m.p.h., 17.2 sec; 0-60 m.p.h., 24.0 sec. Maximum speed, 68 m.p.h. (Road Test, December 9, 1949).

WORLD

Rover

Rover Co., Ltd., Lode Lane, Solihull, Birmingham.

ALTHOUGH it has an unbroken history extending back to 1877, when the founders began making penny-farthing bicycles, the Rover company is not too old to set the pace in technical progress, as its achievement in demonstrating the first gas turbine car two years ago clearly proved. The current Rover 75 is a six-cylinder car of unusual refinement and the manufacturers take considerable pride in the detail work and the high finish given to both chassis and bodywork. They are rewarded by the loyalty of a discrim-

carried in a separate compartment, and a more powerful heater is fitted.

75: 6 cyl., 65.2×103 mm (2.567×4.134 in.), 2,103 c.c. (128.4 cu in.); o.h.v.; compression ratio, 7.25 to 1; 75 b.h.p. at 4,200 r.p.m.; 4 speeds, synchromesh (overall ratios, 4.3, 3.92, 8.77 and 14.5 to 1); steering column control.

Suspension, independent front, coil springs; $\frac{1}{2}$ -elliptic rear. Brakes, Girling hydraulic.

Wheelbase, 9ft 3in (282 cm); widest track, 4ft 4in (132 cm). Overall length, 14ft 10½in (458 cm). Width, 5ft 5½in (167 cm). Height, 5ft 3½in (161 cm). Ground clearance, 7½in (18 cm). Turning circle, 37ft (11.25 m). Weight (approx.), 3,200 lb (1,452 kg).

Tank capacity, 11½ Imperial gallons (52 litres). Tyre size, 6.00-15in. Battery, 12-volt, 51 amp-hour.

Saloon £955

ROAD TEST SUMMARY

Running weight, 3,198 lb (1,454 kg). 52.53 b.h.p. per ton. Maximum torque, 111 lb ft at 2,500 r.p.m.; 18 m.p.h. per 1,000 r.p.m. (top gear). Approx. m.p.g., 22-26 (12.8-10.9 litres per 100 km).

Best acceleration, 10-30 m.p.h., 6.3 sec; 30-50 m.p.h., 13.6 sec. Through gears, 0-30 m.p.h.,

scater, whereas the Roadster is a compact sports car with racy lines on a shorter and narrower chassis with overall dimensions the same as those of the Singer Nine. These compact dimensions, plus a lively engine delivering 50 b.h.p., give the Roadster a particularly lively performance. It is an example of a comparatively rare type at present, with hand-built bodywork which provides two seats and two occasional seats in the rear, plus room for luggage in a locker in the tail. With its hood and side screens it provides the comfort and convenience of a touring car together with the roadholding and handling qualities of a sports model.

S.M. Roadster: 4 cyl., 73×89.4 mm (2.874×3.521 in.), 1,497 c.c. (91.36 cu in.); o.h.v.; compression ratio, 7 to 1; 48 b.h.p. at 4,200 r.p.m.; 4 speeds, synchromesh (overall ratios, 4.87, 6.12, 9.45 and 14.55 to 1); central control.

Suspension, independent front, coil springs; $\frac{1}{2}$ -elliptic rear. Brakes, Girling hydro-mechanical.

Rolls-Royce Silver Wraith.



ating body of owners who appreciate a car which is built to last.

The Rover engine is noteworthy for its F head with overhead inlet and side exhaust valves, an arrangement which gives a good power output and economical fuel consumption. The chassis frame is unusually rigid and the independent front suspension has very widely based wishbones, an arrangement which contributes to the good road behaviour for which these cars are noted. The frontal appearance has recently been changed by the fitting of a new radiator grille which is a logical successor to the grilles fitted on Rover cars before the war. The luggage locker is now free of obstruction, the spare wheel being

6.8 sec; 0-50 m.p.h., 16.2 sec; 0-60 m.p.h., 23.1 sec; 0-70 m.p.h., 35.6 sec. Maximum speed, 82 m.p.h. (Road Test, July 14, 1950).

Singer

Singer Motors, Ltd., Coventry Road Works, Birmingham, 10.

IN common with several of the companies in the British industry, Singer began by building bicycles. They commenced operations in 1876.

Current production is concentrated on three models, the S.M. 1500 saloon, the S.M. Roadster and the Nine 4 A.R. The S.M. 1500 saloon and the Roadster both employ the same overhead camshaft 1½-litre engine; the saloon is a roomy five-

Wheelbase, 7ft 7in (231 cm); widest track, 3ft 10½in (119 cm). Overall length, 12ft 6in (381 cm). Width, 4ft 10in (147 cm). Height, 4ft 10½in (148 cm). Ground clearance, 6½in (17 cm). Turning circle, 33ft (10.05 m). Weight (approx.), 1,838 lb (838 kg).

Tank capacity, 7 Imperial gallons (32 litres). Tyre size, 5.00-16in. Battery, 12-volt, 38 amp-hour.

No price quoted in Great Britain.

S.M. 1500: 4 cyl., 73×89.4 mm (2.874×3.521 in.), 1,497 c.c. (91.36 cu in.); o.h.v.; compression ratio, 7 to 1; 48 b.h.p. at 4,200 r.p.m.; 4 speeds, synchromesh (overall ratios, 5.125, 6.94, 10.78 and 17.02 to 1); steering column control.

Suspension, independent front, coil springs; $\frac{1}{2}$ -elliptic rear. Brakes, Lockheed hydraulic.

Wheelbase, 8ft 1½in (273 cm); widest track, 4ft 3in (129.54 cm). Overall length, 14ft 6in (442 cm). Width, 5ft 3in (160 cm). Height, 5ft 4in (162 cm). Ground clearance, 7in (17.78 cm). Turning circle, 33ft (10.05 m). Weight (approx.), 2,520 lb (1,143 kg).

Tank capacity, 10 Imperial gallons (45.46 litres). Tyre size, 5.50-16in. Battery, 12-volt, 38 amp-hour.

Saloon £725

ROAD TEST SUMMARY

S.M. Roadster: Running weight, 1,813 lb (824 kg). 59.4 b.h.p. per ton. Maximum torque, 72 lb ft at 2,200 r.p.m.; 15.54 m.p.h. per 1,000 r.p.m. (top gear). Approx. m.p.g., 28-30 (10.1-9.4 litres per 100 km).

Best acceleration, 10-30 m.p.h., 5.4 sec; 30-50 m.p.h., 10.2 sec; 40-60 m.p.h., 12.8 sec. Through gears, 0-30 m.p.h., 5.4 sec; 0-50 m.p.h., 13.7 sec; 0-60 m.p.h., 20.8 sec. Maximum speed, 75 m.p.h. (Road Test, September 28, 1951).

S.M. 1500: Running weight, 2,695 lb (1,225 kg). 41.56 b.h.p. per ton. Maximum torque, 79 lb ft at 2,400 r.p.m.; 13.23 m.p.h. per 1,000 r.p.m. (top gear). Approx. m.p.g., 26-28 (10.9-10.1 litres per 100 km).

Best acceleration, 10-30 m.p.h., 6.9 sec; 30-50 m.p.h., 16.8 sec. Through gears, 0-30 m.p.h., 9.1 sec; 0-50 m.p.h., 23.9 sec; 0-60 m.p.h., 36.7 sec. Maximum speed, 72 m.p.h. (Road Test, June 10, 1949).

2½-litre Riley saloon.





Standard Vanguard saloon. Inset: On test in the watersplash at the Lindley proving ground of the British motor industry.

BRITISH CARS FOR THE WORLD . . .

Standard

Standard Motor Co., Ltd., Fletchampsstead Works, Coventry.

STANDARD is the focal element of one of the British motor industry's big six manufacturing groups and it also controls Triumph and builds Ferguson tractors. Before the war, Standard built a wide variety of cars covering most of the popular sizes, but since the war this company has boldly concentrated on one model, the Vanguard, which is built as a saloon and Estate car. The saloon is a compact economical five-seater with an unusually good performance. The transmission is through a three-speed synchromesh gear box, but as part of the continual process of development and improvement the Laycock de Normanville automatic overdrive has been added as an optional extra. This is engaged hydraulically by a slight additional movement of the gear lever and therefore is under the driver's control at all times.

Other changes for the current year include a new front grille, more massive bumpers and a modified line for the bonnet. The rear window has been increased in size and push-button door locks have been adopted.

Vanguard: 4 cyl., 85 x 92 mm (3.34 x 3.62 in.), 2,088 c.c. (127.6 cu in.); o.h.v.; compression ratio, 6.7 to 1; 68 b.h.p. at 4,200 r.p.m. 3 speeds, synchromesh (overall ratios, 4.625, 7.71 and 16.35 to 1); steering column control.

Suspension, independent front, coil springs; 4-elliptic rear. Brakes, Lockheed hydraulic.

Wheelbase, 7ft 10in (238 cm); widest track, 4ft 6in (137 cm). Overall length, 13ft 10in (432 cm). Width, 5ft 9in (175 cm). Height, 5ft 4in (163 cm). Ground clearance, 8in (20 cm). Turning circle, 35ft (10.67 m). Weight (approx.), 2,632 lb (1,200 kg). Tank capacity, 15 Imperial gallons (68 litres). Tyre size, 5.75-16in. Battery 12-volt, 51 amp-hour.

Saloon £590
Estate car £655

ROAD TEST SUMMARY

Running weight, 2,823 lb (1,283 kg). 46 b.h.p. per ton, laden. Maximum torque, 108 lb ft at 2,000 r.p.m.; 16.9 m.p.h. per 1,000 r.p.m. (top gear); 21.75 m.p.h. (on overdrive). Approx. m.p.g., 22-28 m.p.g. (12.8-10.1 litres per 100 km).

Best acceleration, 10-30 m.p.h., 6.6 sec; 30-50 m.p.h., 10.0 sec; 40-60 m.p.h., 15.0 sec. Through gears, 0-30 m.p.h., 6.5 sec; 0-50 m.p.h., 15.8 sec; 0-60 m.p.h., 24.5 sec; 0-70 m.p.h., 39.7 sec. Maximum speed (with overdrive), 81.5 m.p.h. (Road Test, January 25, 1952).

Sunbeam-Talbot

Sunbeam-Talbot, Ltd., Ryton-on-Dunsmore, Coventry.

THE Sunbeam Motor Car Co., Ltd., and Clement-Talbot, Ltd., were two old-established units of the British industry which were acquired by the Rootes Group in 1935, and ultimately amalgamated as Sunbeam-Talbot, Ltd., in 1938. The cars currently built at Ryton-on-Dunsmore, near Coventry, are still sold under the name of Sunbeam in some overseas markets.

Production is now concentrated on a single model, the Ninety, a comfortable



and refined car with sporting lines and a high performance, which has gained a notable record of successes in international competitions, culminating with second place in this year's Monte Carlo Rally, when it defeated many much larger cars.

The saloon is a comfortable four-door four-seater with steel bodywork, whereas the drop-head coupé on the same chassis is panelled partly in steel and partly in aluminium. The folding top of the convertible can be used closed, fully open, or half furled in the de ville position.

The power unit is an overhead valve four-cylinder engine delivering 70 b.h.p., driving through a four-speed synchromesh gear box. Air intake grilles on each side of the radiator supply fresh air to the heating and ventilation system.

Sunbeam-Talbot 90 drop-head coupé.



90; 4 cyl., 81x110 mm (3.1875x4.33in), 2,267 c.c. (138.2 cu in); o.h.v.; compression ratio, 6.45 to 1; 70 b.h.p. at 4,000 r.p.m. 4 speeds, synchromesh (overall ratios, 3.9, 5.81, 9.63 and 13.91 to 1); steering column control.

Suspension, independent front, coil springs; j-elliptic rear. Brakes, Lockheed, two-leading shoe.

Wheelbase, 8ft 1 1/2 in (247.6 cm); widest track, 4ft 2 1/2 in (128.3 cm). Overall length, 13ft 11 1/2 in (425.4 cm). Width, 5ft 2 1/2 in (158.7 cm). Height, 5ft 0 1/2 in (154.3 cm). Ground clearance, 6.63 in (16.8 cm). Turning circle, 36ft 8 in (11.13 m). Weight (approx.), 2,856 lb (1,295 kg).

Tank capacity, 10 Imperial gallons (45 litres). Tyre size, 5.50-16in. Battery, 12-volt, 51 amp-hour.

Saloon £865
Coupe £895

ROAD TEST SUMMARY

Running weight, 3,068 lb (1,395 kg). 51.10 b.h.p. per ton. Maximum torque, 115 lb ft at 2,400 r.p.m.; 20 m.p.h. per 1,000 r.p.m. (top gear). Approx. m.p.g., 21-24 (13.9-11.8 litres per 100 km).

Best acceleration, 10-30 m.p.h., 5.3 sec; 30-50 m.p.h., 13.3 sec. Through gears, 0-30 m.p.h., 6.7 sec; 0-50 m.p.h., 16.0 sec; 0-60 m.p.h., 24.3 sec; 0-70 m.p.h., 35.5 sec. Maximum speed, 86 m.p.h. (Road Test, February 23, 1951).

Triumph

Triumph Motor Co., Ltd., Fletchamstead Works, Coventry.

TRIUMPH began as a bicycle manufacturer in 1885. The company eventually entered the car business, concentrating on quality cars with special features in chassis and coachwork designed to appeal to discriminating buyers.

The company was absorbed into the Standard group in 1945 and now makes two models, the Mayflower and Renown, both of which have individual coachwork in the traditional British knife-edged style. It has the practical advantage of very slim pillars and big window areas, which give excellent driving vision and create interiors with maximum light and head room. The Mayflower is a small economical model with a four-cylinder side-valve engine of 14 litres, while the Renown is a larger car using an o.h.v. four-cylinder engine of 2 litres similar to that employed in the Vanguard. It also has the benefit of the Laycock de Normanville overdrive as an optional extra.

An addition to the range for 1952 is the Renown limousine, which has a wheelbase 3in longer than that of the saloon, and has a glass division between front and rear seats. The heating and ventilation system allows fresh air, warm or cold, to be circulated independently in each compartment.

Mayflower: 4 cyl., 63x100 mm (2.48x3.94in), 1,247 c.c. (76 cu in); side valves; compression ratio, 6.8 to 1; 38 b.h.p. at 4,200 r.p.m. 3 speeds, synchromesh (overall ratios, 5.125, 8.56 and 18.14 to 1); steering column control.

Suspension, independent front, coil springs;

j-elliptic rear. Brakes, Lockheed hydraulic. Wheelbase, 7ft (213 cm); widest track, 4ft 1in (125 cm). Overall length, 12ft 10in (391 cm). Width, 5ft 2in (157 cm). Height, 5ft 2in (157 cm). Ground clearance, 8in (20 cm). Turning circle, 34ft (10.36 cm). Weight (approx.), 1,960 lb (893 kg).

Tank capacity, 10 Imperial gallons (45.46 litres). Tyre size, 5.50-15 in. Battery, 12-volt, 38 amp-hour.

Saloon £450

Renown: 4 cyl., 85x92 mm (3.34x3.62in), 2,088 c.c. (127.8 cu in); o.h.v.; compression ratio, 6.7 to 1; 68 b.h.p. at 4,200 r.p.m. 3 speeds, synchromesh (overall ratios, 4.625, 7.71 and 16.35 to 1); steering column control.

Suspension, independent front, coil springs; j-elliptic rear. Brakes, Lockheed hydraulic. Wheelbase, 9ft 3in (281.92 cm); widest track, 4ft 6in (137 cm). Overall length, 13ft 1in (459.74 cm). Width, 5ft 4in (162 cm). Height, 5ft 5in (165 cm). Ground clearance, 8in (20 cm). Turning circle, 40ft (12.19 cm). Weight (approx.), Saloon, 2,856 lb (1,300 kg); Limousine, 2,912 lb (1,340 kg).

Tank capacity, 14 Imperial gallons (63.64 litres). Tyre size, 5.75-16in. Battery, 12-volt, 51 amp-hour.

Saloon £925

Limousine £925

ROAD TEST SUMMARY

Mayflower: Running weight, 2,107 lb (958 kg). 40.39 b.h.p. per ton. Maximum torque, 58.5 lb ft at 2,500 r.p.m.; 14 m.p.h. per 1,000 r.p.m. (top gear). Approx. m.p.g., 32-35 (8.8-8.1 litres per 100 km).

Best acceleration, 10-30 m.p.h., 7.9 sec; 30-50 m.p.h., 16.3 sec. Through gears, 0-30 m.p.h., 8.8 sec; 0-50 m.p.h., 23.9 sec; 0-60 m.p.h., 42.6 sec. Maximum speed, 65 m.p.h. (Road Test, April 14, 1950).

Renown: Running weight, 2,984 lb (1,356 kg). 51.45 b.h.p. per ton. Maximum torque, 108.3 lb ft at 2,000 r.p.m.; 16.9 m.p.h. per 1,000 r.p.m. (top gear). Approx. m.p.g., 22-24 (12.9-11.8 litres per 100 km).

Best acceleration, 10-30 m.p.h., 6.6 sec; 30-50 m.p.h., 13.5 sec. Through gears, 0-30 m.p.h., 8.8 sec; 0-50 m.p.h., 19.3 sec; 0-60 m.p.h., 30.0 sec. Maximum speed, 74 m.p.h. (Road Test, February 24, 1950).

Vauxhall

Vauxhall Motors, Ltd., Luton, Bedfordshire.

THE Vauxhall Iron Works was making marine engines in London as long ago as 1857, and built its first car in 1903. The reputation of the company was made with a series of high performance sporting cars, including the 30-98, which obtained world fame, but since control was acquired by General Motors in 1926

activity has been concentrated on practical family cars in the lower price ranges and the factory at Luton, Bedfordshire, has become one of Britain's biggest manufacturers.

First result of the recent £10 million expansion programme was the introduction of two new versions of the Wyvern and Velox, which appeared at the London Show last year. Essentially they consist of one unit construction four-door saloon car which is offered with the choice of a four-cylinder engine of 14 litres or a six-cylinder 24-litre engine with variations in trim and equipment. At first the existing power units from the previous range were employed in the new models but two entirely new power units have just been announced and should enhance still further the reputation for performance and economy which these cars enjoy. The current models depart from previous Vauxhall practice by using conventional front suspension with coil springs and wishbones of unequal length. Rear suspension is by half-elliptic springs which are unusual in that they have only three leaves.

Wyvern: 4 cyl., 79.37x76.2 mm (3.125x3.00in), 1,507 c.c. (92 cu in); o.h.v.; compression ratio, 6.4 to 1; 40 b.h.p. at 4,000 r.p.m. 3 speeds, synchromesh (overall ratios 4.625, 7.576 and 15.822 to 1); steering column control.

Suspension, independent front, coil springs; j-elliptic rear. Brakes, Vauxhall-Lockheed hydraulic.

Wheelbase, 8ft 7in (261.6 cm); widest track, 4ft 6 1/2 in (148.4 cm). Overall length, 14ft 4 1/2 in (438.2 cm). Width, 5ft 7in (170.2 cm). Height, 5ft 3 1/2 in (160.6 cm). Ground clearance, 7in (17.78 cm). Turning circle, 35ft (10.67 cm). Weight (approx.), 2,205 lb (1,002 kg).

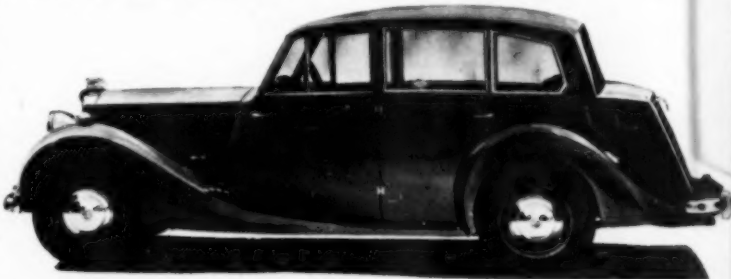
Tank capacity, 11 Imperial gallons (50 litres). Tyre size, 5.60-15in. Battery, 12-volt, 44 amp-hour.

Saloon £495

Velox: 6 cyl., 79.37x76.2 mm (3.125x3.00in), 2,262 c.c. (138 cu in); o.h.v.; compression ratio, 6.4 to 1; 64 b.h.p. at 4,000 r.p.m. 3 speeds, synchromesh (overall ratios, 4.125, 6.725 and 12.798 to 1); steering column control.

Suspension, independent front, coil springs; j-elliptic rear. Brakes, Vauxhall-Lockheed hydraulic.

Wheelbase, 8ft 7in (261.6 cm); widest track, 4ft 6 1/2 in (148.4 cm). Overall length, 14ft 4 1/2 in (438.2 cm). Width, 5ft 7in (170.2 cm). Height, 5ft 3 1/2 in (160.6 cm). Ground clearance, 7in (18.4 cm). Turning circle, 35ft (10.67 cm). Weight (approx.), 2,349 lb (1,066 kg).



Triumph Renown saloon. Inset: A Mayflower on the Continent.





Vauxhall Wyvern saloon.

BRITISH CARS FOR THE WORLD

Tank capacity, 11 Imperial gallons (50 litres). Tyre size, 5.90-15in. Battery, 12-volt, 53 amp-hour.

Saloon £535

ROAD TEST SUMMARY

Wyvern: Running weight, 2,324 lb (1,056 kg). 29.2 b.h.p. per ton laden. Maximum torque, 71 lb ft at 1,800 r.p.m.; 16 m.p.h. per 1,000 r.p.m. (top gear). Approx. m.p.g., 28-32 (10.0-8.8 litres per 100 km).

Best acceleration, 10-30 m.p.h., 7.8 sec; 30-50 m.p.h., 17.3 sec. Through gears, 0-30 m.p.h., 8.6 sec; 0-50 m.p.h., 25.1 sec. Maximum speed, 68 m.p.h. (Road Test, January 18, 1952).

Valera: Running weight, 2,483 lb (1,129 kg). 52.6 b.h.p. per ton. Maximum torque, 106.5 lb ft at 1,100 r.p.m.; 18.4 m.p.h. per 1,000 r.p.m. (top gear). Approx. m.p.g., 22-27 (12.9-10.5 litres per 100 km).

Best acceleration, 10-30 m.p.h., 6.0 sec; 30-50 m.p.h., 10.4 sec; 40-60 m.p.h., 11.9 sec. Through gears, 0-30 m.p.h., 6.8 sec; 0-50 m.p.h., 15.6 sec; 0-60 m.p.h., 22.4 sec; 0-70 m.p.h., 32.4 sec. Maximum speed, 78.5 m.p.h. (Road Test, November 2, 1951).

Wolseley

Wolseley Motors, Ltd., Cowley, Oxford.

WOLSELEY was among the earliest companies in the British industry and produced its first motor vehicle in 1896. It became in 1927 part of the large group which is now the Nuffield Organization, and manufacture was ultimately moved from the Wolseley factory in Birmingham to the Morris works at Cowley,

Oxford. The Four-Fifty and Six-Eighty correspond in size to the Morris Oxford and Morris Six but they are more luxurious cars with more powerful engines. The use of overhead camshafts enables them to combine a high power output with smooth, quiet running, and their four-speed synchromesh gear boxes assist in obtaining the maximum performance. A steering-column gear change is used and has been improved in detail for the current year. Upholstery is in leather with foam rubber overlays and interior woodwork is in walnut. Wolseley cars have steel unit body-chassis structures and independent front suspension by torsion bars, which gives them very good road holding.

Four-Fifty: 4 cyl., 73.5 x 87 mm (2.894 x 3.425 in), 1,476 c.c. (90 cu in); o.h.c.; compression ratio 6.6 to 1. 4 speeds, synchromesh (overall ratios 4.875, 7.342, 10.983 and 18.559 to 1); steering column control.

Suspension, independent front, torsion bar; i-elliptic rear. Brakes, Lockheed hydraulic. Wheelbase, 8ft 6in (259 cm); widest track, 4ft 6in (137.2 cm). Overall length, 14ft 2in (432 cm). Width, 5ft 6in (168 cm). Height, 5ft 3in (160 cm). Ground clearance, 7in (17.8 cm). Turning circle, 38ft (1,158 cm). Weight (approx.), 2,660 lb (1,206 kg).

Tank capacity, 9 Imperial gallons (41 litres). Tyre size, 5.50-15in. Battery, 12-volt, 51 amp-hour.

Saloon £660
Six-Eighty: 6 cyl., 73.5 x 87 mm (2.894 x

3.425 in), 2,215 c.c. (135 cu in); o.h.c.; compression ratio 6.6 to 1. 4 speeds, synchromesh (overall ratios, 4.555, 6.586, 10.248 and 14.642 to 1); steering column control.

Suspension, independent front; torsion bar; i-elliptic rear. Brakes, Lockheed hydraulic.

Wheelbase, 9ft 2in (279 cm); widest track, 4ft 6in (137.2 cm). Overall length, 14ft 9in (450 cm). Width, 5ft 6in (168 cm). Height, 5ft 3in (161 cm). Ground clearance, 7in (17.8 cm). Turning circle, 40ft (1,219 cm). Weight (approx.), 2,884 lb (1,308 kg).

Tank capacity, 12 Imperial gallons (54 litres). Tyre size, 6.00-15 in. Battery, 12-volt, 51 amp-hour.

Saloon £720

ROAD TEST SUMMARY

Four-Fifty: Running weight, 2,604 lb (1,184 kg). 43.0 b.h.p. per ton. Maximum torque, 71.7 lb ft at 2,900 r.p.m.; 15 m.p.h. per 1,000 r.p.m. (top gear). Approx. m.p.g., 24-27 (11.8-10.5 litres per 100 km).

Best acceleration, 10-30 m.p.h., 7.2 sec; 30-50 m.p.h., 17.3 sec. Through gears, 0-30 m.p.h., 7.3 sec; 0-50 m.p.h., 19.9 sec; 0-60 m.p.h., 33.0 sec. Maximum speed, 72 m.p.h. (Road Test, May 25, 1951).

Six-Eighty: Running weight, 2,900 lb (1,318 kg). 55.61 b.h.p. per ton. Maximum torque, 101.8 lb ft at 2,200 r.p.m.; 18.85 m.p.h. per 1,000 r.p.m. (top gear). Approx. m.p.g., 20-24 (14.1-11.8 litres per 100 km).

Best acceleration, 10-30 m.p.h., 5.9 sec; 30-50 m.p.h., 15.0 sec. Through gears, 0-30 m.p.h., 7.1 sec; 0-50 m.p.h., 17.1 sec; 0-60 m.p.h., 24.4 sec; 0-70 m.p.h., 38.6 sec. Maximum speed, 78.5 m.p.h. (Road Test, July 28, 1950).

ABBREVIATIONS: O.h.c.,—overhead valves; o.h.i.,—overhead inlet valves; o.h.c.,—overhead camshaft. B.h.p.,—brake horse-power; m.p.g.,—miles per gallon.

Wolseley Four-fifty saloon.



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DEREK JOHNSTON'S WIN IN ULSTER
CLASSIC KEEPS TROPHY AT HOME

THE Ulster Automobile Club Challenge Trophy, premier award for the Circuit of Ireland Trial, has returned to Ulster. After a year in England it has been won by Derek Johnston of Lisburn, who drove his standard TD M.G. into first place. Never figuring among the leaders in the special tests, except the all-important regularity test, Johnston drove in the quiet, unhurried manner for which he has become famed. Dicers please note; this style of driving has, for only the second time in the U.A.C.'s 27 years of history, resulted in one man gaining both the club's premier trials awards, for Derek Johnston is also the current holder of the Victor Ferguson Memorial Trophy, awarded for most consistent success in the series of trials held throughout the year.

Johnston was also a member of the winning team (as he was in 1949), the Three Chancers, together with Brian McAldin and Billy Chambers, also in TD M.G.s. He is also a member of the U.A.C. team which is current holder of the Scottish Rally team award. Throughout all these events Johnston has had as navigator and co-driver the intrepid and ever-cheerful George Bryson.

This was the tenth Circuit of Ireland Trial to be held since 1936 and was the most exciting. With the great variety of terrain available the circuit has undoubtedly become one of the toughest rally-type events in these islands.

The 1952 trial was held in three stages covering four days. The first stage was Belfast to Killarney, the second a circuit through the Cork and Kerry mountains back to Killarney, and the third a two-day run with an all-night drive around the west and north coasts back to Belfast.

Blazing sunshine was the order of the four days. The unmade roads which com-

The Circuit really
does go round the
Emerald Isle!



The tricky Donegal test involved a downhill zig-zag through pylons. J. W. Nicholson (Morris Minor) made a clean run in good time.



Derek Johnston, who won the premier award, takes his M.G. into the chicane of the final test at Nutt's Corner.

prised the trickier parts of the circuit were thick with dust which ruled out motoring in convoy but tended to ease navigation if one thought it safe to follow the dust cloud ahead. Good navigators were essential, however. The maximum speed limits were generally welcomed, especially by the small car drivers. Here it is interesting to note that although secret speed checks were held every day no small saloon car was penalized for being early. The loss of 100 marks each time was quite a deterrent!

Of an entry of 173 there were 168 starters, and the number of finishers was surprisingly high at 144.

The first section on Easter Saturday led straight to the first test, and the sight of rally cars keeping down to a maximum permitted speed of 30 m.p.h. was quite an experience. The test itself was a speed drive through a chicane with a double curve. Three different channel widths were employed, according to the area of the car (track times wheelbase). This idea

1,000 MILES ROUND IRELAND

continued



Second place in the final tests was taken by Dermott Johnson (Allard).

was used in several tests, thus giving fairer results between classes. R. C. McKinney (Citroën) made best time, the two H.R.G.s of J. H. King and D. H. McWhir being second and third respectively.

Immediately after the test road speeds increased to an average of between 30 and 40 m.p.h. After crossing the border the route led to Castleblaney and so south through Mullinger to a track in the Slieve Bloom Mountains known as The Cut. Here the second test was held, a forward and reversing affair on a steep gradient with loose surface. J. F. Dalton (M.G.) made best time with R. J. Nash (M.G.) and J. Lowrey (Morgan) as runners-up.

The clue to success in this year's trial lay in the second day, which saw the regularity test. This had been kept secret until the previous night. It is notable that of the first nine competitors after Sunday's run not one remained on the leader board after Sunday. The test itself was over 48 miles of unmade mountain track with a required average speed of 24 m.p.h. Known and secret timing points were employed and the result was quite the stiffest test known to most of the entry. Best man here was J. V. Hill (Allard) who tucked in behind Johnston and McAldin. These were just that little early and had to take third and fourth positions, with

Joe Lowrey making second best time. All the eventual class winners did well in this test.

Once again a timed climb of the wonderful Tim Healy Pass was included, f.t.d. going to Dennis Scott (M.G.) in 3min 41sec. Scott's team-mate and last year's winner, Alan Hopkinson, retired soon after this point following a minor accident when returning to find a missed checkpoint.

The third and fourth day's run northwards was uneventful, being interrupted only by a worrying test in the north of Donegal. Again set on top of a mountain on a loose-surfaced steep downhill stretch, it involved motoring through a series of 14ft openings averaging about 30ft apart. G. H. Reilly (M.G.) made best time followed by W. E. Kilroy (Morris Minor).

The final stretch was a straight run through Londonderry to Nutts Corner Airport, near Belfast, where the last two tests were held. The first, braking into a curved channel after a timed section, was best done by M. C. Hogan (Hillman Minx) and the second, a complicated double pylon affair, had as champion N. Browne (570 c.c. Fiat) in a really brilliant 19sec.

RESULTS

Ulster Automobile Club Challenge Trophy: TD M.G. (D. G. Johnston), 322.4 marks lost.

Class 1 (Open Cars).—1, TD M.G. (D. G. Johnston), 322.4; 2, TD M.G. (B. McAldin), 325.8; 3, 1,500 H.R.G. (R. H. McWhir), 333.1.

Class 2 (Saloon Cars up to 1,100 c.c.).—1, Hillman Minx (J. Peile), 407.7; 2, Hillman Minx (M. C. Hogan), 414.1; 3, Hillman Minx (J. E. Dowling), 417.0.

Class 3 (Saloon Cars over 1,100 c.c.).—1, Sunbeam-Talbot 50 (W. N. Jones), 545.0; 2, Hummer Hawk (O. P. C. Lindsay), 547.2; 3, Jowett Javelin (B. D. H. Ginn), 564.6.

Team Prize.—The Three Chancers, TD M.G.s (D. G. Johnston, B. McAldin and W. H. Chambers).

Santhorath Trophy (best visitor).—Jowett Javelin (B. D. H. Ginn), 364.6.

Lambor Trophy.—1,074 Singer (Miss E. M. Andrews), 691.0.

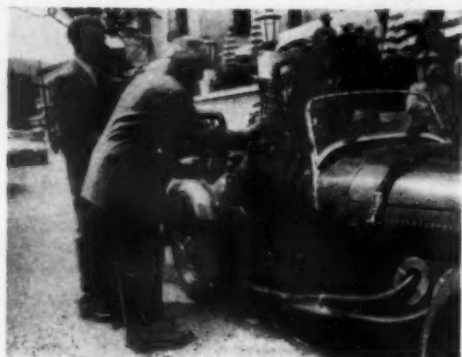
Novice Trophy.—2,433 Riley (E. W. Beaumont).

BRITISH SUCCESSES IN RALLYE SOLEIL

In the Rallye Soleil-Cannes, run in the week before Easter and organized by the A.C. de Cannes, the cup for best outright performance, as well as victory in the 1½-2½-litre sports class, went to H. C. O'Hara Moore, driving his Le Mans Replica Frazer-Nash. Only five of the seventy starters in the rally finished the course without penalty marks; the other four comprised Grosgeat (Dyna-Panhard), de Regibus (Renault Type 1063), Guiraud (Porsche) and Mille Thirion (Porsche), and Moore's performances in the various eliminating tests gave him the best overall result.

One of the tests was run over part of the famous racing circuit at Rheims, and comprised a flying ½-mile speed test. In this, two of the competing XK120 Jaguars averaged over 125 m.p.h., while Moore exceeded 170 m.p.h. In the speed hill-climb test, run outside Cannes over a tricky piece of mountain road, Jaguars took the first five places in their class and made the three fastest times of the day. The Ladies' Prize was won by Mmes Roques and Ordioni, driving a Citroën, who also finished fourth in the 1½-2½-

The cup for best performance in the Rallye Soleil went to H. C. O'Hara Moore and his co-driver C. A. Leavens with their Frazer-Nash. This car also won the 1,500-2,500 c.c. sports class.



litre touring class. In the overall results, Jaguars occupied all of the first twelve places in their class except for sixth place, taken by Donald Healey with his Nash-Healey; but an even more sweeping victory was that of the Porsche marque, which captured the first ten places in the 751-1,500 c.c. sports class as well as twelfth and thirteenth!

CLASS RESULTS

Up to 750 c.c.—Touring: 1, Dyna-Panhard (Grosgeat and Blazini); 2, Dyna-Panhard (J. and R. Fabre); 3, Renault (Baussey and Benoit). Sports: 1,

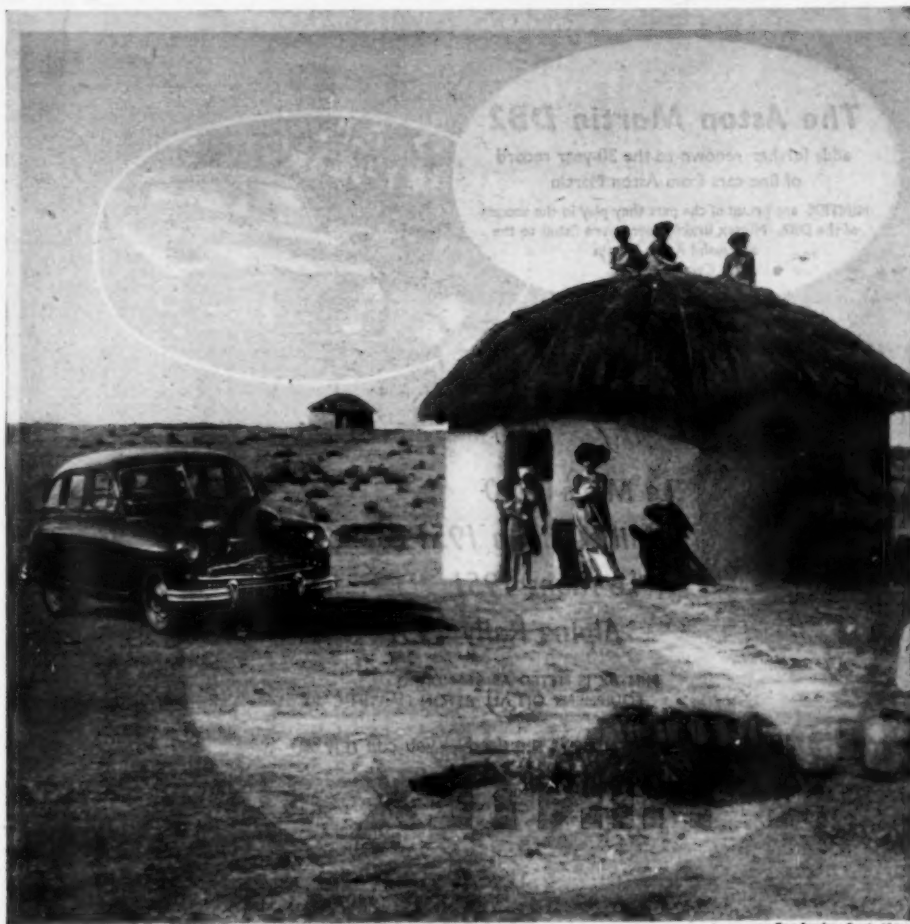
Renault (de Regibus); 2, Renault (Picon and Roustan); 3, Renault (Boucheron and Rutenburg).

751-1,500 c.c. Touring: 1, Peugeot (Guiraud and Beau); 2, (Rie) Simca Aronde (Genet and Dionis); 3, Simca Aronde (M. and Mme Prieux). Sports:

1, Porsche (M. and Mille Thirion); 2, Porsche (Ringenberg and Schneider); 3, Porsche (Molmelli and Bourlaux).

1,501-2,500 c.c. Touring: 1, Renault Frégate (Roux and Gavillet); 2, Citroën (Feltz and Jeannaire); 3, Citroën (Desaint and Bonnet). Sports: 1, Frazer-Nash (O'Hara Moore and Leavens); 2, Frazer-Nash (Hewitt and Canon); 3, B.M.W. (Wagner and Mayler).

Over 2,500 c.c. Touring: 1, Talbot (Masquillier and Lapchin); 2, Bentley (R. N. and Mrs. Hutchison); 3, Bentley (Cooper and Crowley). Sports: 1, Jaguar (D. and Mrs. Taylor); 2, Jaguar (Rohrbreiter and Horting); 3, Jaguar (B. and Mrs. Snow).



A scene near East London, South Africa

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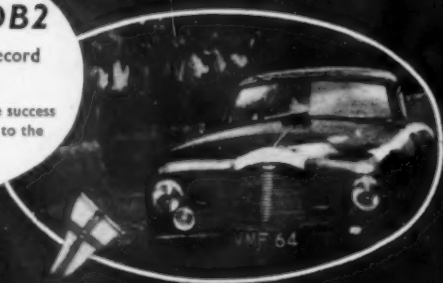


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In the Severn valley, where floods can be severe, small boats are sometimes parked in readiness in the lanes near the river between Gloucester and Tewkesbury. Some lanes and cottages are actually below the level of the river banks.

CORRESPONDENCE

FIRST GEARS

Too High in General?

[64135].—The reports of the R.A.C. Rally were interesting and very instructive, particularly the accounts of the tests on the passes Hard Knott and Wrynose. With the bottom gear ratios fitted today most cars will climb a gradient of 1 in 4 provided always that they can have a clear run without any slowing down or stoppage. In view of the many failures on these passes I rather think that many car manufacturers would lower the first gear if they thought that many of their machines were to be put through these tests in future.

Many cars today have too high a bottom gear if one wishes to be able to take any Lakeland road under any conditions; for example, under full load and with, possibly, an engine not quite in the best condition.

H. HARVEY.

St. Annes-on-Sea, Lancashire.

M.P.G.

Neglected Aspects of Economy

[64136].—Some day, perhaps, someone will awaken to the fact that the carburettor is not always to blame for poor fuel consumption—neither is the "heavy-footed" driver!

Anyone who has done any intensive tuning knows the effect of camshaft design on power, but no one has tried out its effect on fuel consumption.

TIM HALEY.

Coventry.

SIGNALS

Improper Use of the "Turning Right" Gesture

[64137].—Is it not time that the practice of putting out the hand when deviating, or pulling round a stationary vehicle, was discontinued? Surely the safer method is to put the head and eyes out and look and actually see the position with following traffic.

Putting out the hand confers no immunity and will never be accepted as an order from one driver to another. The indignant snort of "Can't you see my hand?" is just rank bad manners. There are no eyes on the end of one's fingers and, as these offending hands are usually flipped out *without* their owner first

of all looking in the driving mirror, the result of such selfish action is often chaos to other traffic.

The actual signal is, "I am going to turn to my right", on page 16 of the Highway Code, and it should be used only when actually turning into a right-hand road, or a right fork road, and then only after looking in the mirror and also allowing for the blind spot which every type of mirror must contain.

Experienced drivers, by correctly positioning their vehicles before turning, can often dispense with signals, either by hand or indicator. This explains the marked absence of signals in dense traffic in the centre of towns.

J. W. C. TATLER

London, W.4.

RUNNING-ON

Extra Air for Cooling Down

[64138].—No mention seems to have been made of the sure cure for this disease (page 455, April 11). It is the fitting of an extra air valve. It is necessary only to open this wide and switch off, and all is well.

I do not advise the adjustment of the throttle so that it closes completely, as this is liable to cause oiled plugs, by sucking oil past the rings, and on overhead valves by sucking it down the inlet valve stems also.

An air valve is the answer; it has many other uses, one being economical coasting.

HARRY TAYLOR.

Salford, 6.

RIGHT OR LEFT?

One Who Has Made the Choice

[64139].—In reply to Mr. J. E. Parry [64097] I bought (in 1948) a Rover 75, left-hand drive, and was told by the company selling the car that once I had driven a l.h.d. vehicle I should never change to r.h.d. I entirely disagreed with them, and the car was delivered and stayed in my garage for two days before I even tried it, fully meaning to make arrangements for the manufacturers to collect the car and convert it to r.h.d.

My wife being anxious to try the car, I took it out for a short run, and after a few minutes I fully appreciated how pleasant a l.h.d. car is, and as time went on I found that night driving was really pleasant; no dazzle. I have yet to meet a fog that will stop me, and I do a tremendous amount of night driving.

CORRESPONDENCE

continued

Another point is the convenience of getting out of the car directly on to the pavement. The only drawback, if this can be listed, is overtaking a high vehicle, but the compensation is that care is taken, a great asset for road safety.

I have also a r.h.d. car, and I say with all truth that I much prefer the l.h.d., and this is after 3½ years of driving both. I might add that I have been driving for 28 years.

Edlesborough, Bedfordshire.

W. G. D. GRANT.

VINTAGE BENTLEY

The Longevity of the 3-litre

[64140].—As a continuous owner for 28 years, except for a few months in 1929, of old-type Bentley cars, Max Millar's article "80 x 149 mm. . . ." (*The Autocar*, April 11) naturally appealed strongly to me.

Here, I consider, is remarkable evidence of the longevity of this, the 3-litre model. The three cars I bought direct from the company in 1924, 1926 and 1927, and subsequently disposed of after considerable mileages, are all in existence and in use today, though in one a 4½-litre engine (Bentley) has been installed.

London, S.W.5.

FORREST LYCETT.

SAFETY LOOPS

Formula 3 Accident Rate Very Low

[64141].—Mr. George Ivans' suggestion [64113] of safety bars being fitted to formula 3 cars is, I think, worth consideration. I would like to point out that, as there are probably over 200 cars in existence in formula 3, the accident rate is extremely low. Nevertheless, the fact still remains that the chances of fatal accidents occurring would be reduced by the fitting of roll bars. The Arnott 500, with a bar and safety belt for the driver, recently proved the advantage of these at Brands Hatch, where the car turned over but carried on with only minor paint scratches, and I do not think that any 500 drivers would object to compulsory bars and safety belts, as they are such an obvious safety factor.

Weston-super-Mare, Somerset.

M. F. MATTHEWS.

ROAD SAFETY

The Right Speed at the Right Time

[64142].—Mr. Assistant Deputy Coroner Dungay's three examples of fatal accidents [64107] could almost be classed as suicides. In each case only the deceased can be blamed. Such acts of folly as stepping out from behind buses, riding bicycles at night without rear lights and falling over in the middle of the road cannot be cured by speed limits. With the old lady stepping out from behind the bus, had the car been going faster it might have passed her before she had time to walk in front of it.

Codicote, Hertfordshire.

A. C. S. IRWIN.

Further Points About "The Right Speed"

[64143].—Surely the Asst. Deputy Coroner [64107] should appreciate that, speed being a function of movement, every road accident could be avoided by a lower speed (in some cases it would have to be nil). This applies equally to the recent case of a cyclist killed by a hare running into his front wheel. The hare should have walked! To close the roads entirely or return to the horse era, even if practicable, might not reduce the death rate, as more people are killed by accidents at home than on the road, and more children used to die from infantile diarrhoea spread by stable flies than are killed on the roads today.

In all three of the cases quoted by the Asst. Deputy Coroner the accidents could also have been avoided by faster driving, so that the motorists concerned would have (1) passed before the elderly lady was so far out in the road, (2) saw or passed the cyclist before being dazzled, (3) passed the schoolboy before he had fallen sufficiently far to be in the lorry's path.

Far be it from me to imply that we must accept the present number of road accidents as inevitable, but the fact is that all accidents are caused by a combination of circumstances, many of which could be avoided by spending a higher proportion of transport taxation on road improvements. In the three cases quoted, the accidents were equally caused by (1) lack of roadside guard rails at bus stops, (2) insufficient mobile police on country roads at night and (3) failure of the road authority to maintain visibility on a corner by hedge clipping. So far as (2) is concerned the remedy would also reduce country house raids, but one wonders if mobile police are sent out at times that will result in the largest income for "over 30 m.p.h." fines.

If road accidents could be compared with railway and air

casualties on a basis of percentage of users in each case, bearing in mind that this would include pedestrians and cyclists, drivers would not suffer so much unfair criticism. Unfortunately there is no means of enumerating the would-be suicides saved by drivers' skill, including (Mr. A. D. Coroner please note!) the many occasions when drivers accelerate out of trouble!

Bognor Regis, Sussex.

ARTHUR H. DOE.

Motorists Are Reluctant to Injure!

[64144].—I have read with considerable interest letter [64107] from Mr. Paul Dungay. Being a driver of one of the so-called "lethal weapons," I fear I shall shock Mr. Dungay when I say that I fully concur with The Scribe's remarks.

I agree that if the speed of the vehicles involved in the fatal accidents mentioned had been very much less, the results would have been less terrible. Your correspondent seems to be labouring under the impression, so prevalent, I fear, with persons in Mr. Dungay's official capacity, that car drivers go about caring little whom they injure or kill. I have been driving a motor vehicle for over 30 years, and am not a slow driver unless circumstances particularly require a low speed. Surely a driver is entitled to expect that others will take precautions when fast traffic is to be expected.

To follow Mr. Dungay's arguments to their logical conclusion, cars should be banned from the roads. Even a speed below walking pace could be the cause of a fatal accident given certain conditions. Obviously in any case where a person is hit by a moving vehicle the greater the speed the greater the impact, but can one envisage a state of things where no vehicle moves at more than about 2 miles per hour? Mr. Dungay seems to forget that every driver is also a pedestrian, and many also are cyclists.

Frankly, I cannot quite see what the above gentleman is trying to prove. The Scribe's remarks seemed to me to be perfectly clear and incontrovertible. I can only assume that, as I have said, Mr. Dungay advocates a speed limit on all roads so low as to make injuring or killing a jay-walker, or careless cyclist, impossible. Such a condition would render our roads a crawling mass.

Ruislip, Middlesex.

C. R. M.

P.S.—I have an accident free record.

"PLEASE PASS"

Defence of the Back Window Notice

[64145].—Referring to letter [64115], may I say that I consider Mr. P. Hall to be quite wrong when he compares a "running-in" sign with a dangling doll?

I have just completed running-in a reconditioned engine in my Citroën and I think that I have been helpful to other motorists who may have been waiting to pass. Surely the displaying of a notice saves everyone a lot of bother.

Orpington, Kent.

R. A. MORRISON.

CARAVAN DATA

Two Points for the Buyer

[64146].—In reply to your correspondent "M. T." [64102], who asks for some indication of caravan weight in relation to horse-power, may I suggest the two following points?

First, that your correspondent, before purchasing a van, ascertains the *ex-works* weight and ignores the unladen weight so often quoted by ambitious salesmen.

Secondly, that a reasonably good guide is one and a half cwt caravan weight per horse-power of the towing car.

Stratford-on-Avon, Warwickshire.

B. H. BURROWS.

RADIO VAGARIES

Interference and Aerial Positions

[64147].—I have followed with some amusement the various arguments and theories regarding suppressors being used with car radios. My first experience with a radio in a car was in a Morris Minor, using a standard R.C.A.-Victor radio with wing-mounted aerial. The rubber-covered aerial lead passed through the motor compartment and firewall (bulkhead—Ed.), on through the back of the fascia to the radio. The only suppressor I used was between the distributor and coil. Perfect reception was received with no static from overhead trolley wires. This aerial was fairly short, rising only six inches above the top of the car.

When I traded this car in on a new Oxford I removed the radio and aerial and installed it in exactly the same way as I did in the Minor except that I did not put any suppressor

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CORRESPONDENCE

continued

in the car of any kind as I found that reception was equal to that in the Minor without one. However, children have a habit of playing with wing aërials and mine became badly damaged. I replaced it with a centre aërial, provision being made for installing one in the Oxford. This aërial is supposed to be more efficient than the wing type and yet, even after fitting a suppressor to the h.t. lead, ignition noise is quite noticeable and much more pronounced when an indicator arm is out.

Maybe the wing aërial is best after all. Probably one of your readers can set me straight.
J. E. M.
Winnipeg, Canada.

[The more efficient, or sensitive, an aërial is in the receptive sense, the more it will pick up interference that is emitted at radio frequency. An efficient aërial minimizes low-frequency interference, on the other hand, by feeding in a strong radio frequency signal, with the result that the amplification (low-frequency) stages of the set need not be tuned up to maximum. The most efficient aërial is the one that has the minimum capacity between it and earth (the car body); consequently a vertical aërial on the car roof should be the most efficient. Our Canadian correspondent does not seem aware that the main argument for suppressors in this country is, nowadays, to prevent car interference with household television as cars pass by.—Ed.]

DAZZLE

Which Lamp Should be Extinguished?

[64148].—I have read much of the correspondence on the subject of dazzle. It seems to me that the answer lies in the fact that dazzle occurs when a large percentage of the parallel rays emitted from an oncoming head lamp impinge on the centre of the visual field of the driver.

The remedy for this would seem to be to achieve the maximum deflection of rays from the straight ahead position. I suggest this could be done by extinguishing the left-side head lamp and dipping the right-side one so that its beam impinges on the left-side kerb.

The advantages would be maximum deflection, and illumination of a large area of road in front of the car so dipped.

Incidentally, I seldom have much difficulty in steering my way through the actual period of dazzle, simply by concentrating on the beam of my own dipped head light; what I hate is the scotoma which becomes apparent after the dazzling car has passed.
M. J. L. PAIN.
Bognor Regis, Sussex.

Lighting Formula for Safety

[64149].—I could not agree more with [64122]; dual dipping, as on modern cars, is about as good as no dipping at all. Manufacturers appear to have catered for the "speed-by-night" merchant, who beetles through the darkness at 60 m.p.h. dazzling all comers with the attitude of "I am aware of your predicament, chum, but I couldn't care less; I am equipped with two F.100s, four spot lights and a searchlight."

My own views are that cars should have a maximum of two head lamps (as fixed by the makers) and only one spot lamp, to be used in fog and snow only. When dipped, one head lamp to be extinguished, preferably the left-side one, and the other lamp dipped and turned in towards the kerb.

Lastly, will makers please dome the glasses of both side and tail lamps so that they may be visible from the side, and, also, how about independent stop lights of an amber colour, as used on London buses?
Rip.
West Wickham, Kent.

NIGHT LIFE

Weight Increase of Water Vapour

[64150].—The suggestion in Service Viewpoint (March 21) that oxygen in water vapour becomes available for combustion was not, I hope, intended to be taken seriously, but I would like to add the following comments to Mr. E. C. Arnold's letter [64106] on the same subject.

He quotes from Heldt's *High Speed Combustion Engines* that engine power is reduced when the humidity of the air is increased; this is, of course, true at constant temperature but is hardly the position in the case now under consideration, when the lower temperature at night is both more apparent and more important than the change in humidity.

During the day the air is heated and tends to take up water vapour, and in the evening when the air temperature falls again,

the relative humidity will increase and may eventually reach saturation point, when dew or mist will be precipitated. During this period the weight of water vapour per pound of air will be constant until the relative humidity becomes 100 per cent, after which it will decrease.

Therefore, for a given volume of charge induced into the engine, the colder the air the greater will be the weight of air (and oxygen), even though the air may be saturated with water vapour and the weight of water vapour also increased.

London, E.18

G. BRANSOM GRIFFITHS.

[Our correspondent quotes tables which show, *inter alia*, that the water vapour per cubic foot at 80 deg F weighs 0.00158 lb, and the dry air 0.071 lb. At 32 deg F the figures are 0.0003 and 0.0802 respectively.—Ed.]

Opinion of a Distributor of Economy Devices

[64151].—Your correspondent, Mr. E. C. Arnold [64106], appears to deny the value in miles-per-gallon increase when the evening mist is rising. He believes that there is loss of power. Our experience, which covers most countries and climates, is exactly the reverse.

For example, a car fitted with a mist-creating device—such mist being drawn into the explosion chambers together with petrol vapour—will travel a greater distance per gallon than a car not fitted with such a device. With such a device fitted correctly, the gears will not need to be changed down so frequently as with a car (same make and h.p.) that does not carry this device. The actual amount of saving is an individual matter of the car itself, for cars of the same make, same year and same h.p., differ as much as individual people. On different days there will be found a different saving using the same car. This is the result of temperature and humidity of the atmosphere.

The point of interest is what exactly happens to a speck of moisture entering the explosion chamber. It is assumed that it suddenly expands very considerably and assists in the striking force behind the piston; in other words, a mist introduced alters a petrol-driven car into a variety of petrol-cum-steam car. The steam, or mist, is immediately ejected and has only one other effect; it tends to decarbonize the engine.

On one of our cars (Wolseley Eighteen, 1939, mileage 96,000) we never get less than 20-21 m.p.g. With it we have passed 23 m.p.g.
NORMAN LEITH-HAY-CLARK,
London, S.W.1.

Norman Aerial, Ltd.

WHOLESALE AND RETAIL

S.M.M.T.-Recognized Factors Are Exclusive

[64152].—My attention has been drawn to the article "Old Cars Deserve More Care" on page 427 of your issue dated April 4, 1952, in which it is stated that piping and other like materials are "obtainable from the bigger factors, who are usually prepared to deal retail as well as wholesale."

As regards those factors recognized by this Society this is not correct, as it is a basic qualification that an exclusively wholesale business is conducted and "Wholesale Only" notices will be found prominently displayed on their premises. They are accordingly not prepared to deal retail.

H. GARRATT,

Registers Department,

Society of Motor Manufacturers and Traders, Ltd.

London, W.1.

PARKING

Problems of Surrey's County Town

[64153].—I have been asked by my committee to reply to the criticism contained in "Disconnected Jottings" in your journal of March 28, in which The Scribe suggests that Chambers of Commerce in such towns as Guildford and Winchester should have considerable say in regard to the police attitude towards parking. I should like to bring to your notice the following points, though I feel sure that The Scribe must be aware of the circumstances obtaining in this town.

(1) Guildford is situated on the side of a steep hill, and level car parking space near the town centre is almost impossible to obtain.

(2) The stopping space available in the shopping streets is quite inadequate to accommodate the very large number of cars carrying shoppers into the town and it is a matter of chance whether one is able to draw up anywhere near the premises one wishes to visit. Anyone who is able to do so is not dis-

CORRESPONDENCE

turbed by the police provided he does not remain there for an unreasonable time, and provided he does not create an obstruction to passing traffic.

(3) The police in Guildford perform a very difficult and thankless task in controlling the vagaries of the motorists and, in the opinion of my committee, they do so, with very minor exceptions, with patience, consideration and courtesy.

(4) I do not think that businessmen, as a general rule, leave their cars outside their premises in the busy part of the town all day and every day as The Scribe suggests; there may be exceptions, but there are always a few inconsiderate people in every community.

Finally, may I say that, if The Scribe can suggest a remedy for the traffic problems of this town, we shall be only too pleased to consider it, and if he is in Guildford again in the near future I shall be delighted to discuss the matter with him.

E. T. THURLOW,

President, Guildford Chamber of Commerce.

Guildford, Surrey.

[The Scribe comments: "No thinking motorist supposes that there is any easy answer to such problems. My comments were based on long experience of trying to use the towns in question for special shopping. No discourtesy from the police has ever been my experience in either town. Barring the through use of certain streets by some types of vehicles may be a drastic palliative in the county town with its layout still imposed by the medieval pattern, if present conditions make large-scale positive action impossible."—Ed.]

POWER PULSES

The Author of the Article Replies

[64154].—Your correspondent Mr. M. H. Bland [64117] is quite right in his criticism of the siamesed inlet port; charge robbery between the two cylinders usually produces a power deficiency of some 5-10 per cent. It seems likely, however, that this interference loss may be reduced with suitable-length pipes, although this remains to be proved experimentally.

However, my article (*The Autocar*, March 14) was concerned with porting from the induction ramming point of view, and this implies that with an engine developing maximum power at, say, 5,000 r.p.m. the induction tract length would be about 2ft. Referring to the case where each cylinder has its own separate port and pipe, but with one carburettor feeding more than one of these long pipes, the article condemns the arrangement as "most unlikely to be successful because of the enormous induction surface area and consequent fuel deposition problem." This objection does not apply to the conventional engines with short induction pipes that Mr. Bland has in mind, nor does it apply to the siamesed port, since this can have its carburettor placed close to the cylinder head and most of the shared induction pipe is then handling air only. Hence my acceptance of this type in spite of its disadvantages.

It is quite true that in calculating the ramming length for a siamesed port it is necessary to take into account the production of two pressure waves per engine cycle at unequal intervals, but this can be done very easily by a simple extension of the basic theory. It is for this reason that the optimum length is only about two-thirds of that for a single-cylinder engine.

South Farnborough,
Hampshire.

CHARLES H. BULMER,
(B.Sc., A.F.R.A.S.)

GOODWOOD

First-time Impressions of the Sussex Circuit

[64155].—I have just attended my first "Goodwood" and my impressions may be of interest. As a follower of motor sport through the pages of your excellent journal for the past 25 years, it is with somewhat mixed feelings that I write this letter.

The organization from the competitors' angle was, no doubt, superb but for the public it was not quite so happy. We arrived well before the start but no programmes were to be had. In view of the large crowd this was, perhaps, understandable. What was not so understandable was the fact that the commentator did not make any allowances for lack of programme information in his announcements until well into the afternoon. By this time, quite a number of people, myself included, had lost interest.

I have one more criticism to offer. Why do the authorities apparently permit a not inconsiderable number of selfish people to bring in steps and trestles, thereby occupying a far greater amount of space than necessary with the attendant risk of a serious accident involving others?

M. F. COUGHMAN.

Worcester.

continued

FRENESHAM POND

The Question of Parking on Common Land

[64156].—On the opposite side of the main road (a very fast straight road) exactly opposite Frenesham Pond, Surrey, there is a series of notices (No Parking, Keep Off, Trespassers will be Prosecuted, liable to a fine of £5, etc.). The land is open common ground, there is no hedge, ditch or fence, and any car can very conveniently get off the main road out of the way of all traffic, causing no obstruction to anybody or thing.

To whom does the land in question belong? Can these notices be upheld in law? Finally, whatever can be the objection to anybody parking there? The ground being completely unfenced, there are no cattle to worry about; neither is there any possibility of cultivation.

Reading, Berkshire.

R. BISHOP.

PINIONS AND SPRINGS

Points Concerning M.G. and Bentley

[64157].—In the Road Test of the 1½-litre M.G. (April 11) it is stated that the position of the Trafficator switch and horn button on the steering wheel hub is a less usual arrangement when rack and pinion steering is used, as in this case. Could someone please explain this to me, as I cannot puzzle out just what effect the type of steering gear and box fitted should have as regards the placing of switches on the steering wheel hub, which is at the other end of the column?

Also, in the description of the 3-litre Bentley engine it states that a single forked rocker was used to open and close the two exhaust valves. Is this an error, or does it mean (a) that the two exhaust valves were opened by one forked rocker and closed in the ordinary way by a spring or springs, or (b) that a forked rocker opened and closed each exhaust valve without the assistance of a valve spring or with only a very light spring?

London, N.16.

A. B. HARDMAN.

[There is often some difficulty in fitting a centrally mounted horn or dip switch when a rack and pinion type of steering is used because the pinion diameter is not sufficiently large to allow the tube carrying the wires to pass through the centre of it.

The 3-litre Bentley engine description was, perhaps, a little misleading on the second point. Normal springs are used to hold the valves on their seatings, the rocker opening them and controlling (in theory, at least) the rate of closing.—Ed.]



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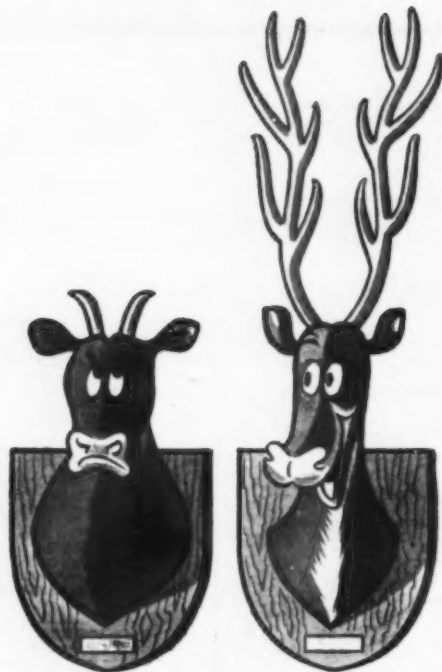
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USED CARS ON THE ROAD



No. 31: 1949 3½-litre Jaguar Mark V Saloon

Price, new: (at time of purchase) £1,925, plus £275 15s 11d purchase tax.	Acceleration from rest through gears to 30 m.p.h., 6.1 sec.	Fuel consumption range: 15-17 m.p.g.	Speedometer reading: 16,158.
Secondhand: £1,500	To 30 m.p.h., 12.6 sec. To 40 m.p.h., 18.5 sec. 30-40 m.p.h. (top gear), 8.2 sec. 30-50 m.p.h. (top gear), 8.7 sec.	Oil consumption negligible.	Car first registered August, 1949

SINCE the introduction of the Jaguar XK120 3½-litre engine, and its subsequent installation in the big Mark VII saloon (of which a Road Test appears in this issue), it is easy to overlook the prowess which the makers had already achieved in building fast, comfortable cars of high quality at relatively low initial cost. In Britain, of course, the Mark V is a much more familiar sight than the current model, and it is likely to remain so for some time—and for many motorists on British roads the handier size of the Mark V is alone a prominent reason for its desirability. The 1949 model tested was provided for the purpose by Parkers (Manchester and Bolton), Ltd., 176, Deansgate, Manchester. The impression given by the car was at once one of classic line and quiet elegance.

The green cellulose was virtually unmarked and well polished, and the chromium plating had the right glitter, although in some places it was a little worn or pitted. The interior was upholstered in matching soft green leather, and this and the carpets showed scarcely any sign of wear. The polished woodwork of the fascia and window surrounds was in good condition, age being noticeable only along the sills of the front windows.

Easy Acceleration

The car performed excellently, its acceleration being a very slight improvement on the figures recorded on a new model in 1949; this, no doubt, was because of the greater mileage having made the engine more free. The speedometer was not guilty of any serious optimism, and it frequently reminded the driver of the way the car would rapidly reach high speeds and stay there, when conditions permitted, with complete solidity. On wavy surfaces slight up and down motion at the front suggested some slackness in the front dampers, but this was not enough to affect the comfort of the occupants.

The gear box, with its centrally placed lever, was a pleasure to use, and no wear was noticeable in the transmission. The car steered with great accuracy, without any lost motion in the mechanism and without road shocks being felt through the steering wheel. To these good performance and handling characteristics could be added the brakes, with their instant, powerful responsiveness. The tyres were good, the wide range of instruments were all working properly, and the automatic mixture control provided instant engine starting, when cold or hot.

Comment on a car of this type would not be complete without special reference to the accessories and refinements, which included the now rare sliding roof, a good radio and a heater. A wide assortment of tools was housed in a special tray in the luggage locker lid and full attention had been paid to passenger comfort and convenience in the design and layout of the interior fittings.

No. 32: 1950 Bristol Type 401 Saloon

Price, now (at time of purchase): £1,925, plus £1,070 18s 11d purchase tax.	Acceleration from rest through gears: To 30 m.p.h., 5.3 sec. To 40 m.p.h., 11.9 sec. To 50 m.p.h., 17.5 sec. 30-40 m.p.h. (top gear), 15.6 sec. 30-50 m.p.h. (top gear), 14.9 sec.	Fuel consumption: 22 m.p.g. approx.	Speedometer reading: 14,058.
Secondhand: £3,000.		Oil consumption negligible.	Date first registered: February, 1950.

IT is sad, if inevitable, that the Bristol comes into that price range which, with prices so heavily inflated by purchase tax, is beyond the scope of the majority of motorists. It is also, however, in that very small group of products which commands wider interest because of the academic and aesthetic appeal of good design, pure styling, and superb workmanship. The car tested, which was provided by William Arnold, Ltd., Upper Brook Street, Manchester, 13, was a little over two years old and had reached the kind of mileage total at which most cars begin to show some result of regular use. It was at the stage where quality of manufacture begins to show its full value.

The black cellulose was in good condition and there was no sign of pitting or corrosion on any of the chromium plating. The pale coloured leather upholstery was perfectly clean, undamaged, and comfortable, and the polished woodwork was also without fault. Quite apart from the excellent appointments of the car, its tremendous road appeal is evident from the moment it is put into motion. If this is in a town the usefulness of the free wheel on first gear is appreciated, and the car tested threaded its way out of Manchester with the minimum of effort from the driver. The engine was perfectly smooth, having retained every bit of its watchlike precision, and, once on the open road, the gear box enabled high speeds to be reached in a time usually associated only with larger-engined high-performance cars. On third gear 60-plus m.p.h. was reached without any engine fussiness and with power to spare, although the exact r.p.m. still in hand could not be deduced because the rev counter was not working. This was the only defective item, however. The excellent gear box, with its precise central



lever, worked perfectly and the comparatively high set of ratios was always ready to assist, for example, in rapid overtaking.

The steering, like everything else, was entirely accurate; light in operation and quick in response. This accuracy on all road surfaces, and the stability of the car as a whole, was assisted by effective spring dampers. The brakes were distinctly powerful, although in braking from higher speeds a vibration was sometimes felt through the steering wheel. The tyres were all in good condition, and a full set of tools was provided.

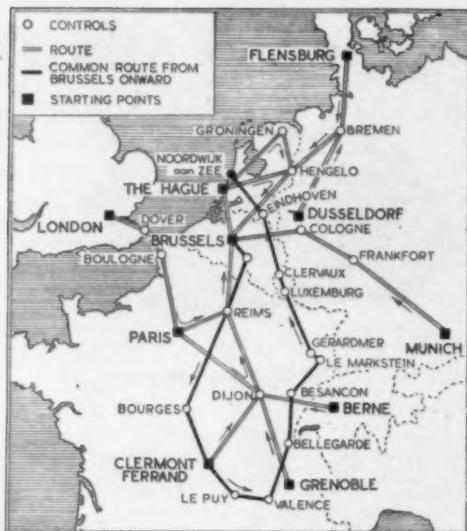
An outstanding feature was the diversity of the instruments and accessories, and the good arrangement of all the controls, including the fly-off type of hand-brake lever between the separate front seats. The car tested was complete with a heater and radio; and an engine warmer (to work from mains power) combined with a battery charger had also been fitted as an extra. There were no body or mechanical rattles, and the engine started at a touch on all occasions.

A Good Start for Tulip Rally

LAST Monday saw the start of this year's Tulip Rally, when the majority of the 246 entrants left their nine starting points en route for Noordwijk, on the Dutch coast, by a circuitous route embracing much of France, and passing through Luxembourg and Belgium. Of the 25 competitors scheduled to start from London—at the unattractive hour of four o'clock in the morning—all but three got away on time; the non-starters were E. V. Lewis (M.G.), W. G. Pitcher (Jowett Javelin) and W. Edwards (Jowett Javelin).

Fortunately, it was a fine night when the competitors assembled in "Bunny" Dyer's hospitable Metropolis Garage, near Olympia, where refreshments and service facilities were available to them before their long journey. The weather held good, too, for the run down to Dover, and all but one of the cars arrived there on time and were safely stowed aboard the S.S. *Dinard* for the trip across to Boulogne. The exception was the Allard saloon driven by Dr. J. Watson, which experienced persistent fuel feed trouble and was forced to retire. A full account of the Rally will appear in next week's issue of *The Autocar*.

The formidable route of the Tulip Rally; an event which has quickly become one of the major European international competitions of its kind.



A.C. "Press Men" Rally Round

THE A.C. Owners' Club seems to have hit on a sound method of giving its members an enjoyable week-end's motoring (April 19-20) without taxing too heavily cars or drivers. The idea was briefly this: the editor of the A.C.O.C. *Bulletin* decided that he must have 16 photographs taken of certain interesting or notable places and—owing to a sudden rush to press—eight of these had to be in the hands of the editorial staff by Saturday evening, April 19, at Great Yarmouth. On this, the first day, objects such as gateways, memorial plaques on historic buildings, and so forth, had to be found in the following places—Barley, Downham Market, Huntingdon (plaque to Cromwell), Moulton Chapel (cross-roads sign), Swaffham, Watton, Wisbech and so to Yarmouth. Members selected their own route and their own times for arrival at the two marshals' check points en route to the finish, penalties being incurred for each minute late over the competitor's estimated time of arrival.

On the second day, the objects were a little more difficult to locate, and those people who had decided they could complete the course in near-standard time were caught unawares. The route back led through Bury St. Edmunds, Cromer, Fressingfield, and Fressingfield. As 30 cars had started from Enfield and three from Wansford, each contingent had to check in at both starting points to equalize the mileage.

Results were very provisional at the time of going to press, as a lot depends upon the competitors' negatives when these are developed. It may be said, however, that Pat Stark did very well, driving a Vauxhall.

VERY SPORTING DERBYSHIRE

WITH 64 entries, the 11th Derbyshire Sporting Trial of the Lancashire and Cheshire C.C., on Sunday last, attracted a considerable following of spectators, who darted from hill to hill with the aid of a special route card. The start and finish were at the Bull-i'-th'-Thorn, Hurdlow, Derbyshire, and observed sections were Slack 1 and 2, Mycock 1 and 2, Woodale, Cow Low, Ghost Quarry, and Denif 1 and 2. There were also three special tests to decide any ties; but without their aid Tony Rumfitt added to his already formidable list of trials successes in the current season.

After a week's fine weather, the hills were dry, but even so they remained formidable. Provisional results are as follows:—

Quick Trophy (best performance): Cotton 1.172

(A. E. Rumfitt), 6 marks lost.

Kukin Brower Trophy (runner-up): Paul Spl

1.172 (R. W. Faulkner), 8.

Higher Road Trophy (3rd place): Bailey 1.442

(K. R. Bailey), 8.

Mastery Trophy (best L. and G. member): Clegg

1.172 s (A. W. Lilley), 14.

First-class awards: Lotus 1.172 (M. R. Lawson),

12; Jacques 1.442 (J. B. Sweeney), 14; Javelin

1.486 (R. W. Phillips), 16; Sleeman 1.172 s (J. D.

Sleeman), 16; Harford 1.172 (T. C. Harrison), 16;

Oliver 1.172 (L. J. Oliver), 22; Cotton 1.172 (R. F.

Chappell), 22; Ford 1.172 s (M. Wilde), 26; Dellow

1.172 (C. R. Hardman), 26; B. N. Spl 1.172 s

(R. A. H. Noble), 28.

Viennese Sports Car



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THE Viennese firm of Wolfgang Denzel is now producing in small quantities a light drop-head sports car based on Volkswagen parts. Fitted with two Solex carburetors with accelerator pumps, the engine has polished ports, larger valves, and a compression ratio of 6.8 to 1, and is claimed to provide a maximum

speed of 87 m.p.h., with great economy. The suspension units are Volkswagens, fitted to a unit body-chassis structure which seats three abreast. An international touch is provided by the braking system, which is that used on the Fiat 1400, while the finned aluminium drums are also of Italian manufacture.



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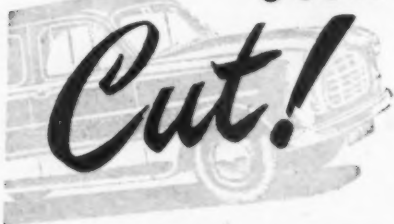
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"THE AUTOCAR" READERS' SERVICE

Tractive Resistance

I find the tractive resistance and tractive effort figures in the Road Tests very interesting. A wide difference in the tractive effort figures between one car and another would automatically suggest that one was in a different class from the other, but this can be upset by a reverse difference in the tractive resistance figures. Presuming that cars on test are in perfect adjustment, what is it that makes the tractive resistance figure vary so much, and what can be done by a private owner to reduce this resistance?

C. J. S.
Birmingham.

THERE are several reasons why the tractive resistance figure varies from car to car. For example, pre-load on axle and differential bearings, friction in oil seals and other moving parts, as well as differences in tyre pressure and loading, are all variables which can quite considerably affect the issue. Even the type of lubricant used for the road wheel bearings can affect the tractive resistance reading.

Regarding a particular car, it is difficult to make any practical suggestion on lowering the tractive resistance, assuming that the obvious components such as brakes, wheel bearings, and so on, have been checked. A variation in tyre pressure or tread pattern may help slightly.

the accident at a police station or to a police constable as soon as reasonably practicable and in any case within twenty-four hours of the occurrence thereof."

This Section was recently considered in Jones v Prothero. In this case Lord Goddard held that "for the purposes of this Section the 'driver' is the person who takes out the vehicle, and he remains the driver until he finishes his journey. . . ." even though at the time of the accident the car which he drove was stationary, with the engine turned off.

Water Pump Leak

The water pump on my car has started leaking and on examination I find a small hole through which the water is escaping. I intended to block this but I noticed that it is not threaded. This made me stop to think—should it be blocked?

Caithness.

J. R. E.

THE hole you mention is almost certainly the drain hole provided for the escape of water that has leaked past the pump. Do not block this. The leak will be caused by a fault within the pump for which the simplest cure is probably a reconditioned unit.

Steering Wheel Switch

On my somewhat elderly car the switch for operating the lights is faulty. It is fitted in the centre of the steering wheel and I cannot get it off. What is the method of getting at this component?

Perth

A. L. S.

IT is quite likely that the switch is at the bottom of the steering column and is operated by a rod from the control. It will be covered in a protective case, removal of which reveals the mechanism. Dirt is a likely cause of trouble and, after disconnecting the battery for safety, the switch may be washed with a brush and petrol. Alternatively, the switch may be at the steering wheel centre, when the tube carrying the wires will be anchored at the lower end. On replacement check the oil level in the steering box.

Reporting an Accident

One must take care, of course, to report to the police any accident involving a personal injury, killing a dog, and so on. However, for collisions between two vehicles it is necessary only for the drivers to exchange particulars.

I recently had my car damaged in a car park when the car was locked and unoccupied. However, witnesses provided the number of the offending driver's car and I passed this information to my insurance company. Should I, by law, have reported it to the police?

E. M. B.

Dagenham, Essex.

SECTION 22 (2) of the Road Traffic Act, 1930, states that "if in the case of any such accident as aforesaid the driver of a motor vehicle for any reason does not give his name and address to any such person as aforesaid, he shall report

Ticking Clutch

When stationary, with the engine ticking over, I can hear a distinct ticking sound from the clutch. This normally disappears if I press the clutch pedal very slightly. What causes the noise?

Bristol.

E. A. J.

PROBABLY the noise is made because the carbon thrust withdrawal block is toppling forward against the pressure ring. This is caused by weakness in the springs which are intended to maintain the block in a vertical position. The cure is new springs but, unless the fault gets on your nerves, there is no need to go to this expense yet.

Protection from Pilferers

I intend to make an extensive tour of Europe this summer and am rather concerned regarding the safety of luggage when, on occasions, the car is left unattended. I am fitting a special safety lock, but can you give me any other advice on how to secure the car and locker adequately so that I may leave the car unattended for reasonably short periods?

Angola,

A. J. S.

Portuguese West Africa.

THIEVES have wide ranges of standard keys and the fitting of a special lock is useful. However, nothing of this kind will stop the "professional thief" if he sees articles of value. The car of a member of The Autocar staff, left for a few minutes outside a big Milan hotel, was broken open with jemmys, which illustrates that a car cannot be made proof against burglars. Probably the most important precaution is to keep all valuables, brief cases and so on in the luggage locker; a thief is not likely to risk breaking open what appears to be an empty car.

● A stamped self-addressed envelope, or an international or Imperial reply coupon, must accompany queries, which should be kept separate from other communications. Technical, legal, sporting and general questions are dealt with, and should be addressed to The Editor, The Autocar, Dorset House, Stamford Street, London, S.E.1.

Queries should not be submitted which are the normal business of manufacturers' service departments

Polishing Ports

I am attempting to obtain a high polish in the ports and manifold of my TD M.G. I am achieving a fair result with emery paper and paraffin assisted by wire brushes and polishing mops driven by a 1/2 in drill. I am also using small carborundum stones in this drill. I should be glad of your advice, however, on the correct type of stone to use on a cast head such as this one (to avoid scouring), and also whether there is any type of stone which would produce a high polish on this material.

E. S. R.

Bury St. Edmunds, Suffolk.

YOU seem to be working on the right lines in your attempt to polish the ports of your TD, but you may find it useful to use rotary files in place of rotary carborundum wheels. There is no easy way of producing a high polish. It is a matter of manual skill.

Controls for the Disabled

I hope to be the proud possessor of my first car and first driving licence this year, but unfortunately I am rather handicapped by a misfortune to my right leg, and I expect some difficulty in the operation of the throttle and brake pedals through not having sufficient movement in my ankle. I understand, however, that it is possible to operate the throttle by a hand control, thus leaving my right foot free for the brake pedal. I would therefore like to know the official view on this type of control and what would be the reactions of an official tester when I take my test?

Retford, Nottinghamshire.

L. P.

THE use of a hand throttle control is quite orthodox for disabled drivers and is widely used. Good, reliable components are now marketed specially for this purpose. Do not forget to mention your slight disability, however, on your insurance and driving licence application forms.

Chain Drive

Could you give me some idea of the method of working out the final gear ratios on a chain-driven Fraser-Nash? Does one take the number of teeth on a sprocket into account or is it the diameter of the sprockets?

F. E. N.

Bishop's Stortford, Hertfordshire.

THE final drive ratio is: No. of teeth on driven sprocket divided by No. of teeth on driving sprocket multiplied by bevel box ratio. Or you could take out the plugs, put the car in gear and wind it forward by the starting handle until the rear wheels have completed one turn, counting the turns of the engine.



George Abecassis really burns rubber off the inside rear tyre of the H.W.M. as he accelerates out of the Hairpin during the [bale] race meeting. At present, these cars are not fitted with a ZF limited-slip differential, although plans are in hand for their modification in the near future.

THE SPORT

by J. A. COOPER

THE race meeting at Ibsley was, on the whole, excellent, in spite of the large number of non-starters. Many of these, of course, had blown up their cars the previous weekend, either at Goodwood or Brands Hatch; sometimes I wonder if many competitors do not try to do far too many events in a short space of time. I don't mean the professional driver; he has to cram as many events into his crowded season as possible, to make the game pay and to keep up with the Joneses. And he should have the organization to back a crowded programme. The amateur is in a different position, and even a 500, easily maintained though it may be, needs a surprising amount of work to keep it absolutely *au point*. And when racing practically every weekend, this is not an easy thing to achieve.

THE Marseilles G.P. on Sunday, the second of the eight Grands Prix de France for formula 2 cars, should be a closer fought race than that at Pau a week ago. It is to be hoped that by now the H.W.M. team has overcome the brake troubles with which they were plagued on that occasion, while Gordini has also announced that his new 2-litre (which practised at Pau but did not run in the race) will be ready for the Marseilles race and will be driven by Manzoni; together, these should offer some opposition to the works Ferraris. Bira and Behra will drive the 1½-litre Gordinis. The two Maserati-Platés 2-litres will run again, this time driven by de Graffenried and André Simon, former Gordini driver. Peter Whitehead should also run, though probably with his Ferrari and not the new Alta with which he is entered; this latter car should be ready in time for the Daily Express Silverstone meeting on May 10.

ONE of the French-entered 4½-litre Ferraris in the Le Mans race will be driven by veteran French driver René Dreyfus, together with Pierre Louis-Dreyfus. René will be remembered as a Bugatti and Delahaye works driver in the palmier pre-war days, and very good he was too. Nowadays he lives in America, where he owns a fashionable restaurant in New York—but he is taking a holiday in Europe

this year! This year's Ferraris of this type are reputed to develop 240 b.h.p. and weigh less than 16½ cwt with oil and water; they also have stronger back axle and gear box gears than last year, when they experienced several failures of these components, while the clutch has also been redesigned.

THIS forthcoming trial in France, to show the French the British way of trials, is developing into quite a nice trip. As previously stated, the London M.C. are handling the organization, and can accept up to 36 entries. The drivers and passengers will be accommodated free for the three nights involved (June 20-21-22) in the Hotel des Tresums at Anney; on Saturday the 21st they will have a trip

The Man at the Wheel

I. M. M. STEWART

A name that has suddenly come to the fore in sports car racing is that of Ian Stewart, who, in addition to being a prominent member of the new Ecurie Ecosse, has this year been chosen to partner Stirling Moss at Le Mans as a member of the official Jaguar team.

Ian Stewart, Scots, tall and boyish, is only 22 years old—the same age as Stirling Moss—and hails from Perthshire. This is only his second season of serious racing, although he had previously taken part in many Scottish sprint events and hill-climbs, such as Rest-and-Be-Thankful and Bo'ness, with a varied selection of sports car machinery but, as he puts it, "no results to speak of." Last year he drove his own XK120 Jaguar in the race meetings at Turnberry, Crimond and Winfield, and scored several resounding successes; so much so that his name began to be mentioned in many places as a coming attraction. As a direct result of this, he was given the opportunity to test the XK120C Jaguar on the M.I.R.A. testing circuit at Lindley in Staffordshire, and by his showing therein has ensured his inclusion in the works team for this year. He has also teamed up with Sir James Scott-Douglas and W. A. Dobson in the aforementioned Ecurie Ecosse Jaguar

either on the lake at Anney or to Geneva. On Sunday there will be the prizegiving, with a social evening to follow. Leaving Anney on Monday morning, they will return via Rheims, where on Tuesday they will make a trip to view some celebrated champagne cellars.

The trial itself will be run under regulations similar to those applying to last year's Gloucester. Sydney Allard and Dave Price will act as stewards, and any enthusiasts over in France for Le Mans who care to volunteer to stay on and marshal will be most welcome. Enquiries to F. D. Dent, 28, Alexander Avenue, Brondesbury Park, London, S.W.10.

ENTRIES for the Luxembourg G.P. (May 22—formula 3) total 27, of which just over half are British. And without appearing over-confident, it would seem almost certain that a British victory will result this year as last, when Alan Brown scored with his Cooper. Nevertheless a good race should result over an interesting circuit; I sincerely wish that some of the Continental half-litres would improve sufficiently to give the Coopers and Kiefts a good run for their money, as competition is essential, and the more international the better.

ENTRIES

Cooper-Mortons: Brandon, Brown, Carter, Rippon, Samsen, Sandercock and Adolf Lane. Cooper-J.A.P.: C. A. N. May, P. Swales and G. Bayle. Kieft-Mortons: Moss, Headland, Leona. Kieft-J.A.P.: Parker. Maserati-Mortons: Winton. J.A.S.-Mortons: Collins. Leston-Mortons: Leston. Beale-J.A.P.: Beale and Richardson. J.B.-J.A.P.: Bernardet and Ashton. Teira-J.A.P.: Bianchi. Zig-J.A.P.: X. Scamporio-B.M.W.: Komossa. Kahn-B.M.W.: Kahn. D.S.-Parthard: Glocker. V.S.M.: van den Bempt.

THE Daily Express Trophy race, organized by the B.R.D.C. and scheduled to happen on May 10 at Silverstone, has already attracted an excellent entry of formula 2 cars. Among the strong Continental challenge are two works Ferraris (probably Farina and Villorresi), three Gordinis (Bira, Manzoni and Behra), two Ferraris from the Swiss Ecurie Espadon (Fischer and Hirt), two Maserati-Platés (de Graffenried and Chiron or Pagani)



team, in conjunction with genial David Murray of Edinburgh.

When Ian is asked what his profession is, he is in the habit of replying that he is a farm labourer. While this has recently been, strictly speaking, perfectly true, it is also only fair to say that he hopes shortly to have his own farm up in Perthshire. Nevertheless, he will still have enough spare time to carry on with his racing career, and the many who have watched his classic and unhurried style and prophesied a great future for him will agree that this is a very good thing for all concerned.

and three Veritas (Ulmen, Pietsch and Helfrich). From this country they will be opposed by five H.W.M.s (Macklin, Collins, etc.), four Connaughts (McAlpine, Downing, etc.), at least two Alfas (Peter and Graham Whitehead), two Frazer-Nashes (Ken Wharton and Tony Crook), two Aston-Butterworths (Aston and Montgomerie-Charrington) and two Cooper-Bristols (John—constructor—Cooper and Mike Hawthorn). This is certainly going to be some race! In addition, of course, there will be the Production Car races and a formula 3 race, together with some special attractions.

THE Mille Miglia, as always, should be a hotly contested and very fast race this year. Among the entries appear Villosio with a Ferrari, Caracciola, Lang and Kling with the new 300SL Mercedes coupés, Stirling Moss with the XK120C Jaguar, Reg Parnell, George Abecassis and Tommy Wisdom with Aston Martins, Donald Healey with the Nash-Healey, four of the new 2-litre eight-cylinder competition Fiat coupés, and Alfa Romeos, Lancia Aurelias and Porsches in large numbers. There is also the rumour that Fangio and Gonzalez will drive Maseratis, the former with one Zanardi and the latter with Sanesi as co-driver.

THE M.G. Car Club's Midland Centre held its third Welsh Rally on Saturday and Sunday, April 19-20, starting from West Bromwich and finishing at Criccieth. Winner of the Bryant Trophy, for the best performance, was J. R. Charlesworth (M.G.).

REGULATIONS are now out for the West Essex C.C. race meeting at Boreham on May 17; this is a closed invitation event, open also to members of the B.R.D.C., Half-Litre, Vintage, Bugatti, Aston Martin Owners and Bentley Drivers clubs and the M.C.C. There will be three 5-lap sports car races (two scratch and one handicap), a Bentley handicap, a 10-lap scratch formula 3 race and a similar *formule libre* race. The sports car races carry first prizes of £10 and a cup, the Bentleys will fight for the Tim Birkin Memorial Trophy, while both the racing car events have a first prize of £100 and a cup, with other awards *pro rata*. Entries close May 12; enquiries to G. E. Matthews, 48, Gaynes Hill Road, Woodford Bridge, Essex (Buckhurst 7000).

BY the time you read this I should be in Holland after following the Tulip Rally through France, Luxembourg and Belgium. This is always a good rally, and should be exceptionally so this year. It is a pity that the British entry is rather smaller than last year's.

CLUB NEWS

Renault O.C.—This club, which has been recently formed, will run a rally on Sunday, May 25, which all Renault owners are invited to attend. Rendezvous is the Old Manor House Hotel, Witley, Surrey, 3.30 for 4 p.m.

Veteran C.C.—Three sets of regulations published recently for veteran car events are those of the Sheringham Rhododendron (May 24), Stourbridge (May 31) and Swindon-Cirencester (June 7) rallies. The first of these should provide a lovely spectacle, for the rallying point, where the final tests will be held, is at Sheringham Hall, Sheringham, Norfolk, where the rhododendrons will be in flower. The Stourbridge event will comprise a rally to the Bandstand, Mary Stevens Park, Stourbridge, at 12 noon, where driving tests will be run during the

afternoon; and the Swindon-Cirencester Rally, on June 7, will be run in three parts, with a rally to Swindon, Wiltshire, a road safety drive within the Borough of Swindon, followed by an untimed run to Cirencester, and a gymkhana in the grounds of the Royal Agricultural College there. (The Secretary, Veteran C.C., 46, North Row, Oxford Street, London, W.1.)

Four-Cylinder Club of America.—From the United States comes news of a practice gymkhana run recently near Glendale, California. The usual parking tests, reversing and manoeuvring antics were performed, but no entry fee was charged and no prizes were awarded at the finish, which resulted in a friendly free-for-all. If a driver did not at first succeed, he just tried again, and so on. Another club activity is the building—and financing—of a four-cylinder racing car (or race car as the Americans have it), which seems to be undertaken with great verve every Monday evening at a local garage. Extract from one club member's account of it reads as follows: "Last Monday the frame, after two days' start, was finally welded up. The first time we attempted to weld it up

COMING SHORTLY

- APRIL 26.—Manchester University M.C. Annual general meeting, University Union, Burlington Street, Manchester, 7.30 p.m.
- 25.—Alvis O.C. (Northern Section). Get-together and film show, Bull and Royal Hotels, Preston, Lancashire, 7.30 p.m.
- 25.—Hants and Berks M.C. Social meeting, New Inn, Eversley, Hampshire, 8 p.m.
- 25.—Mid-Cheshire C.C. Social meeting with Lancashire and Cheshire C.C., Kilton Arms, near Mere, Cheshire, 7.30 p.m.
- 26.—Hants and Berks M.C. Versatility Trial, starting Castle Combe, Wiltshire, 9 a.m.
- 26.—Kirkcaldy and D.M.C. Race meeting, Beveridge Park, Kirkcaldy, Scotland.
- 26.—Alvis Register. Gathering, Phoenix Hotel, Hartley Wintney, Hampshire, 6 p.m.
- 26.—Veteran C.C. Rally to Metropolitan Police Motor Driving School, Hendon, 11.30 a.m., followed by driving tests.
- 26.—Eastern Counties M.C. Race Meeting, Snetterton Airfield, Norfolk.
- 26-27.—Sporting Owner D.C. Night Navigation trial, Green Inn, Northall, Buckinghamshire, 9.30 p.m.
- 26-27.—Pathfinders and Derby M.C. Rally, Derby.
- 26-27.—Severn Valley M.C. Rally, Criccieth.
- 27.—Marseilles Grand Prix, France.
- 27.—Gosport A.C. Gosport Speed Trials, Flight Test Road, R.N.A.R.Y., Fleetlands, Gosport, Hampshire, 2 noon.
- 27.—Brent Vale M.C. Driving tests, Byron Hotel car park, Ruislip Road, Greenford, Middlesex, 2.30 p.m.
- 27.—Stockport M.C. Blackpool Rally, starting Manchester, Whalley, Sheffield, Chester.
- 27.—Exmoor M.C. Spring Sporting Trial, Studdons Garage, Minehead, Somerset, 12 noon.
- 27.—Southern Jowett C.C. Mystery run.
- MAY 3.—Aston Martin O.C. Spring meeting, Snetterton Heath, Norfolk; first race 11.30 a.m.
- 3.—Vintage S.C.C. Silverstone race meeting, 12.15 p.m.
- 3.—Scottish S.C.C. Turnberry race meeting, Turnberry Airfield, Ayrshire, 2.30 p.m.
- 3.—Bristol M.C. and L.C.C. Closed race meeting, Castle Combe.
- 3.—M.G. Car Club (S.W. Centre). Visit to Bristol Aeroplane Company works.
- 3-4.—B.A.R.C. Inter-Centre Rally, arriving Droitwich afternoon.
- 3-4.—N. Staffs M.C. Rally, Blackpool and Droitwich.
- 4.—Mille Miglia, Brescia, Italy.
- 4.—Mid-Surrey A.C. Grand Cup Trial, Cricketers Inn, Fiebrighe, Surrey, 2.30 p.m.
- 4.—Sheffield and Hallamshire M.C. Sham Cup Trial, Norfolk Arms Hotel, Hollow Meadows, Sheffield, 2 p.m.
- 4.—Kentish Border C.C. Driving tests, near Maidstone, Kent.
- 4.—Sunbæ. Closed rally to Weston-super-Mare, Golden Cross Hotel, Marlborough (Birmingham-Bromsgrove road), Worcestershire, 8.30 a.m.
- 4.—British Trials Drivers' Association. Luncheon, White Lion Hotel, Banbury, Oxfordshire, 12.30 p.m.
- 4.—A.C. Owners' Club. Vintage section rally and treasure hunt, The Chequers, Lemsford, Hertfordshire.
- 4.—Cornwall Vintage C.C. Driving tests, Davidstop, Cornwall.

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CLUB NEWS

continued

we borrowed a three-phase welder, only to find that our source of juice was two-phase. Undaunted, we rented a machine, hooked it up and found it wouldn't run. We screamed blue murder (at \$5 per day you can scream awful loud). We found out that we had hooked a 240-volt machine to a 120-volt outlet.

Half-Litre C.C.—The Brands Hatch May 18 meeting for 500 c.c. racing cars will be a closed club event, although spectators are, of course, admitted to all meetings. Racing will start at 2 p.m.

The programme has been divided into three main races, a Junior race (for drivers never having gained a 1st or 2nd place in any 500 c.c. race), a Senior race (drivers who have gained a 1st or 2nd place), and finally a Juniors versus Seniors event, in which the first seven in each of the two previous races will compete against each other.

Secretary of the Half-Litre Car Club is now K. E. Carter, of 100, Station Road, Sidcup, Kent.

Riley M.C.—A new centre has been formed with its headquarters at Cardiff. Secretary is A. H. Hesp, Castle Garage (Cardiff) Ltd., Castle Street, Cardiff.

Worcestershire M.C.—The Spring Rally on Easter Sunday was run in perfect spring weather, with 19 competing cars. A point to point route finding test comprised the first section of the event, in which competitors had to find the shortest possible routes. As this involved the necessity of approaching nine controls from precisely the correct directions, it is not surprising, perhaps, that only one competitor retained a clean sheet to the

finish. Tea followed at Brockhampton, and at 6 o'clock the cars were sent off on a regularity test. Drivers had to retrace the same course and average six set average speeds over six marked distances. Best performance was made by Dudley Johns, in an M.G. saloon.

Sporting Owner D.C.—The night navigation trial (April 26-27) will be run in the Chilterns area. Starting from the Village Green Inn, Northall, Buckinghamshire, the course will be some 180 miles, containing 12 check points to be located by map references. Invited clubs: Berkhamsted, Chiltern, Peterborough, Vintage S.C.C. (E. Fisher, Paddock Drive, Fulford Road, Leighton Buzzard).

Sheffield and Hallamshire M.C.—There will be three main classes in the Shann Cup Trial, for novices, lady competitors and standard cars. The route of about 30 miles in Derbyshire and Yorkshire will have a scheduled average speed of 12 m.p.h., including the observed sections. Start will be from the Norfolk Arms Hotel, Hollow Meadows, Sheffield. (Entries close April 30; to Hon. Competition Secretary, Westgrove, Grove Road, Totley Rise, Sheffield.)

Mid-Surrey A.C.—The annual Grand Cup Trial will start from the Cocketers Inn, Pirbright, Surrey, at 2.30 p.m., May 4. The course will be under ten miles, of a non-chassis-breaking nature suitable for standard cars; there will be classes for open and closed cars. (Mrs. F. Bird, The Croft, 101, Woodmansterne Road, Carshalton Beeches, Surrey.)

IN BRIEF

Owing to recent increases in costs, Herbert Terry and Sons, Ltd., have increased the prices of valve springs by approximately 10 per cent.

A new depot has been opened at 25, St. Cuthbert's Street, Bedford, by the Goodyear Tyre and Rubber Co., Ltd. Mr. R. Bendall is the office manager, and the telephone number is Bedford 4525-26.

Champion sparking plugs were used on the winning Ferraris in the Grands Prix of Pau (April 13), Turin (April 6), and Syracuse (March 16), and the Circuit of Sicily (March 9).

Richard Taylor (Garages), Ltd., of Victoria Street, Stourbridge, Worcestershire, are holding a Rover service week from Monday, April 21, to Friday, April

25. A representative of the Rover technical service department will be in attendance.

The telephone number of the Bristol district office of the Firestone Tyre and Rubber Co., Ltd. has been changed to Bristol 61105-06.

Pirelli, Ltd., have appointed Mr. B. Sykes to represent them in the eastern counties area of Norfolk, Suffolk, Cambridgeshire and Huntingdon. Mr. Sykes until recently was with Calfyns, Ltd.

On Saturday, April 5, 64 employees who had served Wellworthy Piston Rings, Ltd. for more than 25 years were presented with gold watches by the managing director of the company, Mr. John W. Howlett, O.B.E.

INFORMATION SOUGHT

Correspondence, addressed c/o *The Autocar*, can be forwarded on behalf of readers seeking the following information and handbooks:—

No. 16294. 21.6 h.p. Graham
"E.L."—Hints and tips on maintenance; also a handbook.

No. 16295. 1935-36 Lagonda Rapier
"W.T.D."—All possible information, maintenance hints and a handbook.

No. 16292. Series II Morris Twelve
"J.W.M."—General information and a handbook.

No. 16297. 1934-35 Riley Nine
"A.P.C."—Maintenance hints, all available information and a handbook.

No. 16298. 1938 Singer Nine Bantam
"W.W.K."—All possible information and a handbook.

No. 16299. 1928 1½-litre Alfa Romeo
"D.S."—Any available hints on maintenance, also a handbook.

No. 16300. Back Numbers Required
"G.A.B."—*The Autocar* for March 26, July 9 and September 24, 1948, also May 12, 1950.

No. 16301. Engine and Gear Box Conversion
"R.B.C."—Advice and hints on fitting an 8 h.p. Ford engine and Ford Ten gear box in a 1939 Fiat 500 chassis.

No. 16302.—Handbooks Required
"L.A.C."—1936 17 h.p. Armstrong Siddeley.
"R.M.S."—1937 Morris Ten.

"P.G.B."—1934 Morris Twelve-Four, on loan.
"A.D.L."—1937 Wolseley Fourteen; or a workshop manual.

"A.M.C."—1935 16.95 h.p. Alvis Silver Eagle.

"P.C.F."—1947 Vauxhall Ten.

"F.M."—1937 Series II Morris Ten.

"A.E.B."—1922-29 7 h.p. Jowett.

"K.W."—1933 16 h.p. S.S.I.

"F.W.P."—1939 Triumph Dolomite.

"B.S."—1936 15 h.p. Daimler.

"J.C.B."—1939 Hillman Minx.

"A.F.S."—1932 Morris Cowley.

"R.A.A."—1934-35 Hillman Minx; also a wiring diagram.

"G.J.L."—1937 TA-type M.G. Midget.

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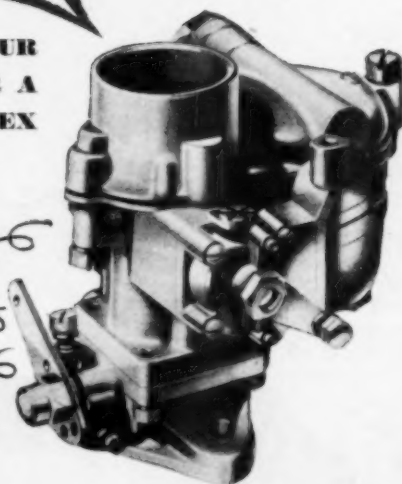
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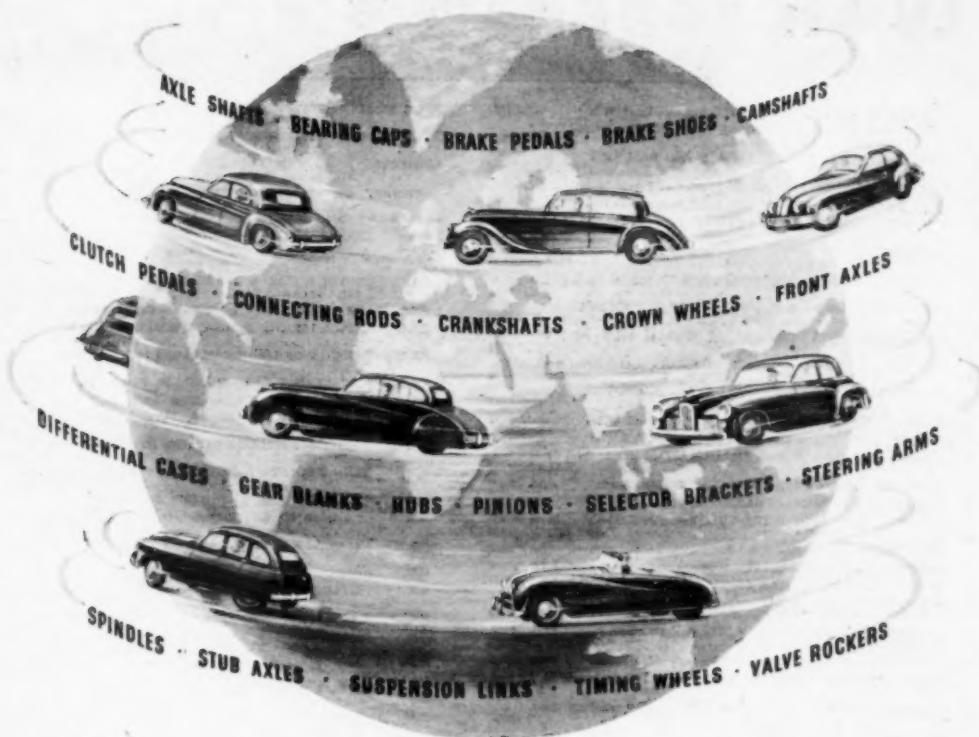
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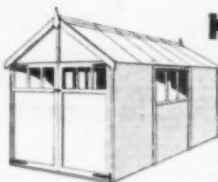
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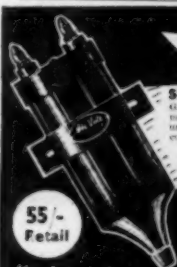
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